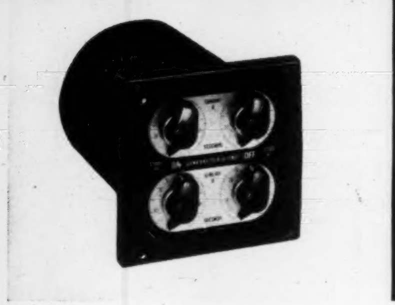
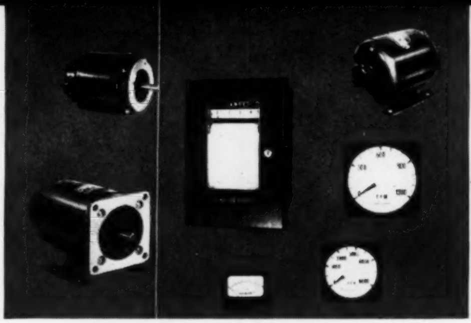
INSTRUMENTS and AUTOMATION

1958 BUYERS' GUIDE



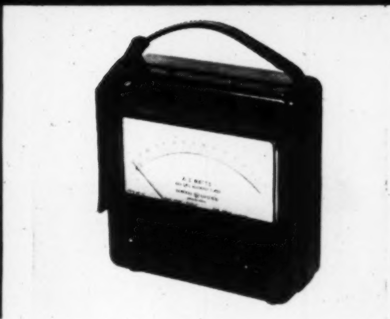
TIMING DEVICES

Accurate G-E timers are easily adapted to virtually all timing applications.



SPEED MEASURING EQUIPMENT

Complete instrumentation provides a highly accurate and economical answer to speed problems.



PORTABLE INDICATING INSTRUMENTS

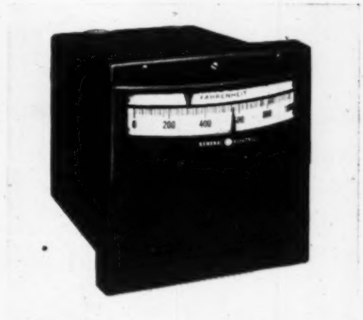
G-E portables combine rugged dependability with laboratory-type accuracy.

RECORDERS

Choose from a wide variety of both a-c and d-c recorders and controllers.

INSTRUMENT STANDARDIZATION CONSOLE

Single complete facility provides fast, easy, low-cost standardization of both a-c and d-c instruments.



HP-30 SERIES PYROMETERS

New space-saving pyrometers feature ±0.5% accuracy and printed circuits.

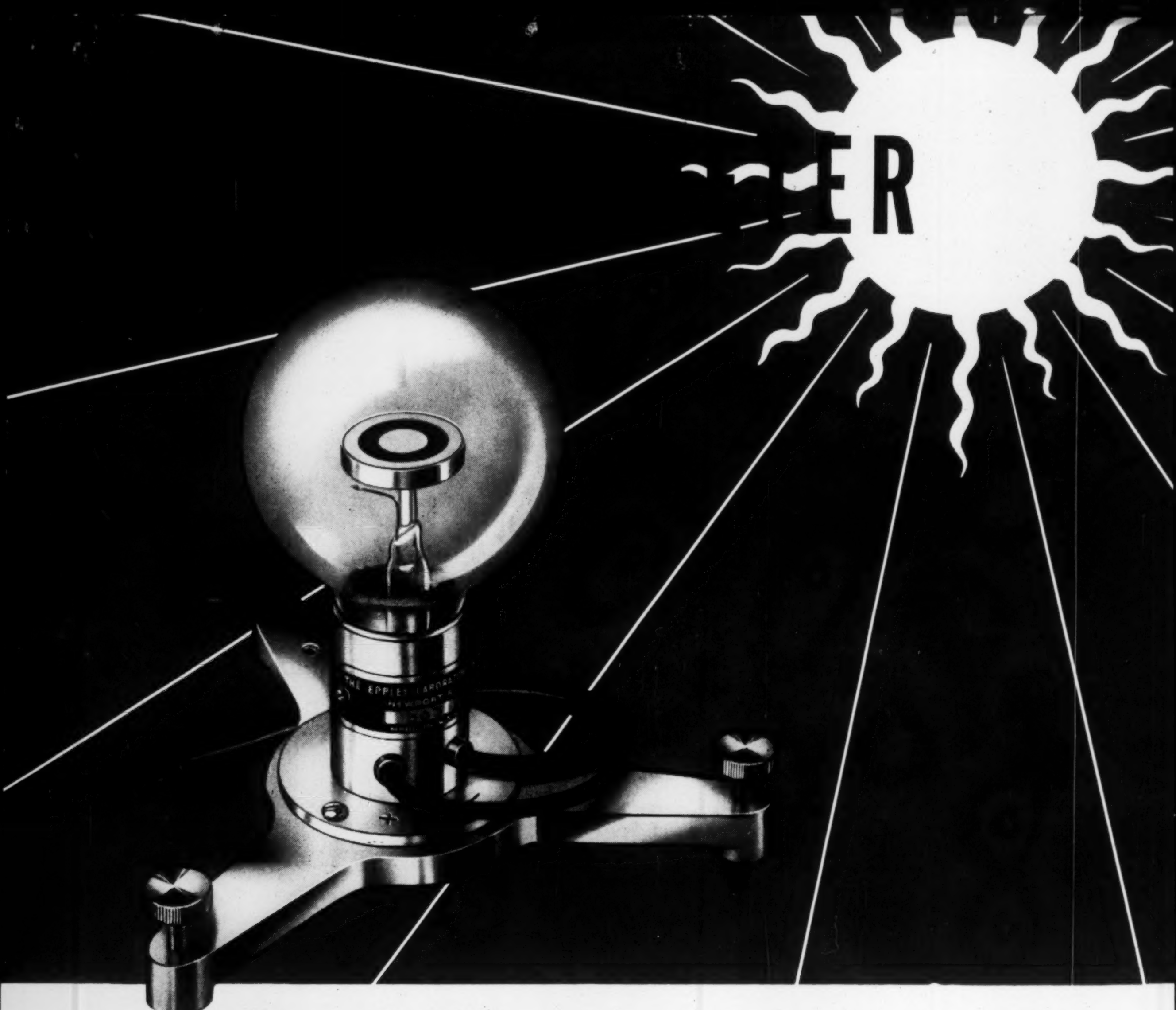
SPECIFY GENERAL ELECTRIC INSTRUMENTS

Your answer to measurement problems on the production line . . . in the laboratory.

For further information about these and other G-E instruments, write: Section 585-75, General Electric Company, Schenectady 5, N. Y., and ask for free catalog, GEC-1016.

GENERAL ELECTRIC

For more information circle **1** on inquiry card.



For the Measurement of

SOLAR RADIATION

Eppley Pyrheliometers are used for solar radiation measurements at ninety-eight weather stations in the continental United States, Canada, Alaska, Greenland, Iceland, Caribbean Sea, and the Pacific Ocean. Sixty-two of these stations are under the direction of the United States Weather Bureau. The Eppley Pyrheliometer was adopted as standard equipment by the Weather Bureau after considerable experimentation. It was found to be the best instrument so far tested by the Bureau.

Used in conjunction with a suitable recorder, the Eppley Pyrheliometer will provide an accurate and reliable record of total solar and sky radiation on a horizontal surface.

Bulletin No. 2 on Request

Address: 3 Sheffield Ave., Newport, R.I.

THE EPPLEY LABORATORY, INC.

NEWPORT — RHODE ISLAND — U. S. A.

electro-mechanical computer and control components by Librascope

ANALOG-DIGITAL CONVERTERS

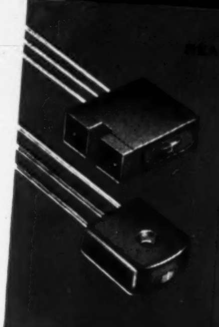
Most versatile line of shaft position to digital converters models for Gray, Binary, and Binary Coded Decimal Systems. Special models for sine-cosine read-out. Used in digital airborne controls, machine tool controls, or wherever position data must be translated into digital form.

Ask for Catalog No. E10-1

SINE-COSINE MECHANISM

Provides for instantaneous solution of problems involving the sine or cosine of an angular variable. Angular rotation is converted into a displacement proportional to sine or cosine of the input. Compact, simple, self-contained design.

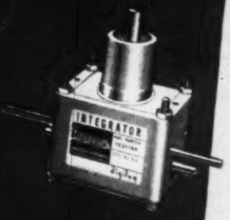
Ask for Catalog No. 304062



READ-RECORD HEADS

A complete line of Read-Record Heads for all types of magnetic drum memory systems. Simplicity of design, flexibility of operation, high reading signal and low current are basic characteristics of these read-record heads which are used where reliable performance is essential.

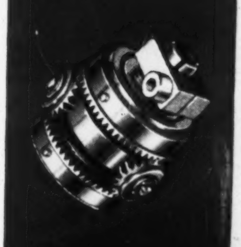
Ask for latest Catalog



BALL-DISC INTEGRATOR

A precision integrating mechanism for totalizing, rate determination, and differential analyzing. Can also be used as a closed loop servo-element for accurate variable speed drive. Small in size, rugged construction for long life; extreme precision.

Ask for Catalog No. 304061



HOLLOW SHAFT DIFFERENTIAL

Four models of precision differentials for application to problems of angular sums, angular velocity sums or sequence operations. May be installed or removed without disassembly of unit or differential. High accuracy; unlimited displacement; small radial clearance. A time-tested design.

Ask for latest information

FOR MORE THAN 20 YEARS, Librascope has manufactured mechanical and electrical computers and components for military and commercial purposes.

Librascope products are designed for reliability, long-life, trouble-free performance.

If you have a problem concerning complete computer/control systems, contact Librascope.

Representatives in principal cities.

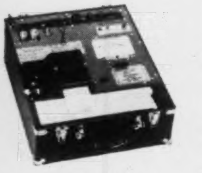
GPE LIBRASCOPE

LIBRASCOPE, INC., 808 WESTERN AVE., GLENDALE, CALIFORNIA

For more information circle 3 on inquiry card.

HICKOK ELECTRONIC Test Instruments HICKOK

9 TUBE TESTERS FILL ALL REQUIREMENTS



MODEL 123A

CARDMATIC TUBE TESTER

Automatic Tube Testing Machine

Model 123A: An automatic tube test to laboratory accuracy that instantly selects any tube to meet the exact requirements of your specific circuit application. Ideal for production line use by factory personnel, or for TV service companies.

MODEL 539B

PORTABLE TUBE TESTER

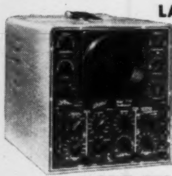
Most Accurate

Model 539B: Features simplicity of operation in providing a complete and accurate evaluation of electron tubes. Has Mutual Conductance circuits, 6 micromho ranges, 4 AC Signal voltages, metered line voltage, metered grid voltage and other important features.

7 OSCILLOSCOPES MEET SPECIALIZED REQUIREMENTS

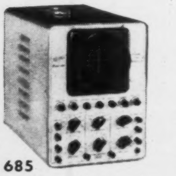
LABORATORY CATHODE RAY OSCILLOSCOPE

Wide Range . . . Versatile



MODEL 770

Model 770: Provides unusually wide range of DC to 5 MC. 10 M.V. RMS per inch sensitivity. Built-in calibrating voltages. New flat-faced tube. Illuminated calibrated screen. Mumetal shield. Shock mounted. This highly stable 'Scope is laboratory quality throughout.



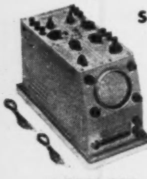
MODEL 685

INDUSTRIALS' 5-INCH PORTABLE

Model 685: DC amplifiers and DC to 750KC response. Sensitivity is 20 MV RMS per inch. Shock mounted amplifiers and good circuit design provide excellent stability for use in all phases of electronic work. The illuminated calibrated screen and ideal design features will please many an industrial who would expect to pay much more for this quality and completeness.

SMALLER SIZE LABORATORY OSCILLOSCOPE

3-Inch Portable

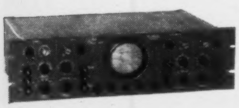


MODEL 385

Model 385: DC to 4 MC, within 3 db, 0.75 RMS volts per inch sensitivity. Sweep circuit oscillator; 3 cycles to 50 KC. Input impedance: vertical and horizontal amplifiers; 2.2 megohms—25 mmf. Features replaceable circuit sections. High quality throughout. Also available in portable, moisture-proof, weather-proof aluminum carrying case as preferred by field engineers.

INDUSTRIAL LABORATORY OSCILLOSCOPE

3-Inch Rack Mount



MODEL 387R

Model 387R: Popular rack-mount style in an accurate 3-inch oscilloscope. Features identical vertical and horizontal amplifiers. DC to 500 KC response. 10 MV RMS sensitivity. Designed to permit versatile use in all phases of electronic work.

11 GENERATORS WITH SPECIALIZED FUNCTIONS

MODEL 710

SINE-SQUARE WAVE GENERATOR

For Laboratory & Industrial Use

Model 710: Provides an accurately calibrated source of sine wave and square wave functions over a wide frequency range. Sine wave total harmonic distortion below 1%. Hum level better than 90 db down. Square wave rise time less than .1 Microsecond. 20 cycles to 1 MC in five ranges on both sine and square waves.

MODEL 295X

MICROVOLT SIGNAL GENERATOR

125 KC to 175 MC on Fundamentals

Model 295X: Ideal for mobile radio and other communication equipment design and maintenance. Output 0.1 microvolt to 100,000 microvolts. 125 KC to 175 MC continuous on fundamentals. 400 cycle modulation—approximately 30%. Attenuation down to 0.1 microvolt — no external attenuator pad required. Vernier Control permits hairline settings. Silverplated copper cage shielding. Test leads are furnished.

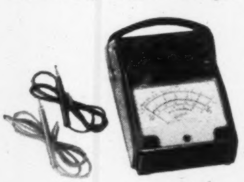
5 VTVM and VOM INSTRUMENTS

MODEL 209A

TRUE VACUUM TUBE

Laboratory Size and Accuracy

Model 209A: Contains large 9" meter with zero-center scale. Highly accurate for servicing industrial electronic equipment. DC Volts: 0-1200 in 6 ranges. AC Peak-to-Peak Voltage: 0-1200 V. in 6 ranges. Capacitance 0.1 to 10,000 MMF in 2 ranges, 0-1000 MF in 5 ranges. 50 MH to 100 henries. 0.1 ohm to 10,000 megohms in 7 ranges.



MODEL 455

NEW VOLT-OHM-MILLIAMMETER

You Can't Burn It Out!

Model 455: New design portable VOM. Includes all practical ranges. Features patented protection system which protects both the meter and associated circuits from damage due to accidental overload. Quality designed for utility and attractiveness. Neoprene carrying case available.

HIGHLY ACCURATE DC and AC PORTABLE INSTRUMENTS

MODEL 14

Ammeters, Milliammeters, Microammeters, Voltmeters, Millivoltmeters, Volt-Ammeters. Thermometers are contained in a phenolic case lined with heavy steel shell which shields from the effects of stray magnetic fields. Scale divisions are spaced equal distances apart. Accuracy within ½ of 1%. On special order, Model 14 can be supplied with a calibration chart to provide accuracy to 0.2%. Also available is a complete line of pocket portables.

METERS

The many special movements developed by HICKOK are: electrodynamometers, self-contained frequency meters, galvanometers, true logarithmic deflections, special curves for special purposes and ruggedized designs for highest shock tests. Full technical information on the complete line of HICKOK instruments and test equipment is available on request. Kindly list details of your requirements and ask for Catalogs No. 32 and 33.

THE HICKOK ELECTRICAL INSTRUMENT COMPANY

10514 DUPONT AVENUE • CLEVELAND 8, OHIO

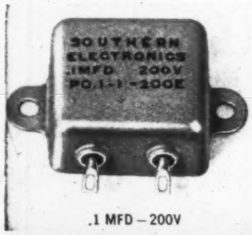
HIGHEST QUALITY ELECTRICAL AND ELECTRONIC TEST INSTRUMENTS

For more information circle **4** on inquiry card.

where precision counts – it's S.E.C. first!

PLASTIC PRECISION CAPACITORS

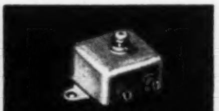
Tubular .1 MFD – 200V

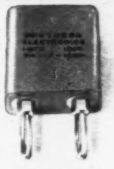

.1 MFD – 200V

10 MFD ± 1% 200V (4⁷⁄₁₆ x 3¹⁄₁₆ x 2⅛)

5 MFD – 100V (1¾ x 1¼ x 1⅛)

1 MFD – 200V


Adjustable (1³⁄₁₆ x 1¹⁄₁₆ x 1¹¹⁄₁₆)


Plug in (1 MFD – 150V)

I. POLYSTYRENE

with these outstanding properties:

- Tolerances as close as 0.1%
- Insulation Resistance as HIGH as 1×10^{12}
- Dielectric Absorption as LOW as .0001
- Dissipation Factor as LOW as .0002
- Temperature Coefficient . . . 100PPM per °C
- Stability as close as .05% drift in 1 yr.
- Voltage Derating . . . none to 170°F.
- Hermetically sealed for endering accuracy!

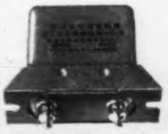
also available:

- Many other case styles or mounting brackets
- Any capacitance from .001 to 50 MFD (incl. special values)
- Voltages from 50 to 5000

2. POLYESTER

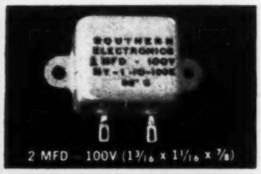
with these outstanding properties:

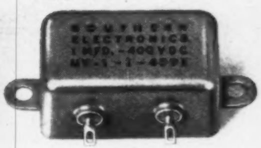
- Tolerances as close as 1%
- Insulation Resistance as HIGH as 1×10^{11}
- Dielectric Absorption as LOW as .001
- Dissipation Factor as LOW as .003
- Temperature Coefficient . . . 800 PPM per °C
- Temperature range . . . . . to 150°C.
- Hermetically sealed for endering accuracy!

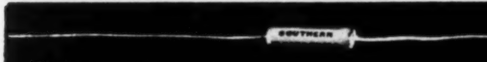

4 MFD – 300V (2 x 2 x 1)

120 MFD ± 10% 50V

Plug in (4 MFD – 150V)

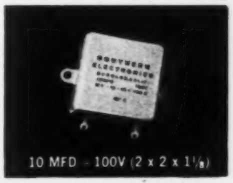

2 MFD – 100V (1³⁄₁₆ x 1¹⁄₁₆ x ⅞)


1 MFD – 400V (1¾ x 1¼ x 1)


.01 Tubular (.175 x ¾)

.1 Tubular (.312 x 1)

Printed Circuit Small .11 MFD – 50V


10 MFD – 100V (2 x 2 x 1⅛)

3. RC NETWORKS

- Close tolerances
- Hi-grade precision resistors
- Potted units
- Meet mil specs

Many other types of precision RC Networks available!

S.E.C. PRODUCTS HAVE BEEN SPECIFIED IN SEVERAL MISSILE APPLICATIONS!

SOUTHERN ELECTRONICS
Corporation

POLYCON S.E.C MYCON

For your most exacting requirements – always specify S.E.C.

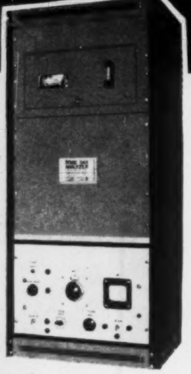
150 West Cypress Avenue, Burbank, California

PIONEERS IN CUSTOM PRECISION CAPACITOR ENGINEERING

For more information circle 5 on inquiry card.

SONIC GAS ANALYZER

Versatile • Sensitive



Applicable to Lab and Plant Stream Use

Operates by measuring velocity of sound in gas

Typical sensitivities P.P.M. per Div.

Gas	In Air	In Helium
CO_2	8	1¼
CCl_2FCF_3 (Freon)	1	½
H_2	5	37
N_2	133	2
O_2	41	2

Convenient Sampling • Continuous or fixed samples can be used

Simple Operation • No special skill required; the instrument cannot be damaged in normal use

Low Drift • A temperature stabilized crystal controls the frequency of oscillator to provide a drift of less than 5 divisions per hr. There is negligible drift during analysis.

NATIONAL INSTRUMENT LABS, INC.

6108 RHODE ISLAND AVENUE, RIVERDALE, MARYLAND

Write for bulletin 175

For more information circle **6** on inquiry card.

What Makes Springs
Look Like This?

Springs and wireforms take on some pretty queer shapes at times. They're designed that way to do unusual jobs. However, many springs are unnecessarily complex in design—they may do the job, but they cost too much. Here's a good suggestion:

When you have an unusual or "tricky" spring application let Lewis Engineers help you find the simplest, lowest cost answer to your spring problem. Lewis Engineering experience is just one of the many "extras" you get when you make Lewis your source for springs. Whether it's help in spring design, packing springs for efficient assembly line handling, or simply getting top quality springs at competitive prices—call on Lewis . . . springs and wireforms are our business.

Looking for the solution to a spring problem? Send us drawings, specifications, or samples.

Lewis Spring & Mfg. Co., Chicago

2638 W. NORTH AVE., CHICAGO 47, ILL.

For more information circle **427** on inquiry card.

THE 1958 I&A BUYERS' GUIDE

Part Two of the Two-part October 1957 issue of Instruments and Automation

CONTENTS

1. *Index to Instruments and Apparatus.* In this section, products are listed alphabetically. Under each heading appear the names of the manufacturers of this equipment (and of the sole representatives of such manufacturers). *Pages 50 to 253.*

2. *Directory of Manufacturers and sole representatives,* with complete addresses and brief descriptions. *Pages 255 to 299.*

ADVERTISERS' INDEX

Ace Electronics Associates ... 160
Ackerman-Gould Co. ... 131
Acme Gauge & Instrument Co., Inc. 171
Acoustica Associates, Inc. ... 234
Acromark Company ... 130
Aerotech Specialties Inc. ... 105
Alden Products Company ... 71, 80
Alfax Engr. Co. ... 24
Allegany Instrument Co. Inc. ... 17
Alteneder & Sons, Theo ... 191
American Chain & Cable Company ... 169
American Laubscher Corporation ... 193
American Machine and Metals, Inc. 21
American Paulin System ... 60
American Research Corp. ... 98
American Super-Temp Wires, Inc. ... 251
American Thermo-Electric Co. ... 218
American Time Products, Inc. ... 8
Amglo Corporation ... 144
AMP Incorporated ... 37
Amperite Co., Inc. ... 88
Amphenol Electronics Corporation ... 12
Amthor Testing Instrument Co., Inc. 171
Annin Company ... 13
Applied Research Laboratories ... 198
Applied Science Corporation of Princeton ... 206
Aristo Grid Lamp Products Inc. ... 127
Assembly Products, Inc. ... 182, 186, 214
Associated Specialties Co. ... 162
Associated Spring Corporation ... 201
Automatic Electric Sales Corporation 36
Automatic Methods, Inc. ... 128
Automatic Timing & Controls, Inc. ... 194, 205, 225
Autron Engineering, Inc. ... 86
Axler Associates, Inc. ... 101

Bacharach Industrial Instrument Co. 2 2
Bache & Company, Semon ... 114
Bailey Meter Company ... 61, 62, 66, 75, 81, 82, 94, 104, 105, 107, 110, 154, 174, 176, 180, 182, 184, 196, 220
Baird-Atomic, Inc. ... 86
Ballantine Laboratories, Inc. ... 247
Barton Instrument Corporation ... 104
Beckman Instruments, Inc. ... 43
Behlman Engineering Company ... 161
Bellmore Gear Corp. ... 112
Berkshire Laboratories ... 229
Biddle Co., James G. ... 108, 120, 187, 209
Biggs Co., Carl H. ... 149
Bin-Dicator Co. ... 126
Bird & Co., Inc., Richard H. ... 48
Birnbach Radio Corporation ... 260
Black Light Corp. ... 235
Borg Corporation, George W. ... 44
Boulin Instrument Corporation ... 209
Brainin Co., C. S. ... 81
Branson Ultrasonic Corporation ... 235
Brew and Company, Incorporated, Richard D. ... 89
Briggs Filtration Co. ... 53
Bristol Company ... 82, 154, 156, 161, 166, 178, 211, 218, 222
British Industries Corp. ... 65
Brookfield Engineering Laboratories Incorporated ... 244
Brush Electronics Company ... 22-23
Buffalo Meter Co. ... 107
Burgess Battery Company ... 60
Burling Instrument Company ... 213
Bushnell & Co., Inc., D. P. ... 190

B W Controller Corporation ... 126
Cannon Electric Company ... 79
Cash Company, A. W. ... 40
Central Scientific Company ... 207
Circon Component Company ... 78
Cohn Corp., Sigmund ... 250
Colvin Laboratories, Inc. ... 168
Commercial Iron Works ... 151
Commercial Plastics Co. ... 232
Conoflow Corporation ... 172, 175, 236, 238
Cosa Corporation ... 66
Crawford Fitting Co. ... 103
Crescent Insulated Wire & Cable Company ... 251
Crystal Glass Tube & Cylinder Co. ... 116

Dahl Company, George W. ... 241
Davis Instruments ... 111
Del Electronics Corp. ... 230
Derbyshire, Inc., F. W. ... 129
Development Engineering Company ... 98
Dialight Corporation ... 158
Dice Company, J. W. ... 93
Dietz Company, Henry G. ... 227
Dillon & Co., Inc., W. C. ... 217
Dixon Incorporated, William ... 228
Dragon Engineering Co. ... 239
Drake Manufacturing Company ... 158
Dwyer Mfg. Co., F. W. ... 137, 170
Dyna-Empire, Inc. ... 132
Dynamic Instrument Company Inc. ... 166

Ebert Electronics Corp. ... 184
Eder Instrument Co. ... 211
Edin Company, Inc. ... 152
El Products Corp. ... 143
Electric Auto-Lite Company ... 42
Electro Development Co. ... 195
Electro-Medical Laboratory, Inc. ... 71
Electro Products Laboratories ... 139
Electronic Associates, Inc. ... 76
Ellis Associates ... 204
Emery Company, A. H. ... 249
Empire State Laboratories, Inc. ... 112
Environmental Equipment Corporation ... 101
Eppley Laboratory, Inc. ... Inside Front Cover, 200
EPR Special Products Corp. ... 152
Epsco Incorporated ... 90
Esterline-Angus Company, Inc. ... 54

Falcon Alarm Co., Inc. ... 142
Falcon Machine & Tool Co., Inc. ... 113
Federal Screw Products Inc. ... 193
Fineisen, A. R. ... 113
Fish-Schurman Corp. ... 102
Fisher Governor Company ... 30-31
Fitzpatrick Electric Supply Co. ... 250
Flow Corporation ... 106
Foxboro Company ... 26-27
Freed Transformer Co., Inc. ... 86, 187

Gaertner Scientific Corp. ... 150
Gallien & Son, R. P. ... 130
Gardner Laboratory, Inc. ... 224
Geier & Bluhm, Inc. ... 124
General Electric Company ... Front Cover
General Motors Corporation ... 9
Geotechnical Corporation ... 194
Glass Instruments, Inc. ... 115
Golden Anderson Valve Specialty Co. ... 240
Gow-Mac Instrument Co. ... 110
Graton & Knight Company Inc. ... 25

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FROM MILLIWATTS TO KILOWATTS

HIGH VOLTAGE POWER SUPPLIES AND EQUIPMENT

We have sold quantities of these power supplies to laboratories, industrial concerns, the government and universities. Only the best available selected material goes into these units, so that you will have many years of dependable service. Only a few of our standard models are shown below. Quotations on special supplies cheerfully given.

PRECISE MEASUREMENTS COMPANY

HIGH VOLTAGE POWER SUPPLIES

A precision, well constructed high voltage supply for meter testing and calibration, electrostatic painting, breakdown tests, nuclear physics and wherever high potentials at low currents are needed. Output is well filtered direct current. Adjustable by means of a control on the front panel. Available with or without meter. Input voltage is 115 v. 60 cycles. Regulated models feature even easier adjustment of output voltage. Once you turn the knob to desired value, voltage then remains constant regardless of power line changes or load variations. Regulation is ±1% or better over most of the control range. Closer regulation on special order.

Model		Maximum Voltage	Price	Price Regulated Model
6001	With Kilovolt Meter	1,000	$75.00	
6000		2,500	60.00	
6000-A	With Kilovolt Meter	2,500	80.00	$120.00
6005		5,000	75.00	
6005-A	With Kilovolt Meter	5,000	95.00	135.00
6010		10,000	85.00	
6010-A	With Kilovolt Meter	10,000	105.00	145.00
6015		15,000	95.00	
6015-A	With Kilovolt Meter	15,000	115.00	155.00
6025		25,000	115.00	
6025-A	With Kilovolt Meter	25,000	155.00	205.00

MIRROR SCALE HIGHER ACCURACY METERS: Recommended where more exact settings or measurements are needed. Meter size has been increased to 6 inches for easier reading. Price $35.00 additional on any meter equipped model.

AC INSULATION & BREAKDOWN TESTERS

Used in testing insulation where AC voltages are desired. Dual instruments are also available which provide choice of AC or DC output with simple toggle switch selection. Units include kilovoltmeter, current meter and automatic overload cutout circuits.

Model	Voltage	VA	AC	Price AC and DC
3000	0 to 3,000	75	$150.00	$ 250.00
3010	0 to 3,000	300	250.00	400.00
3050	0 to 3,000	1,500	500.00	650.00
3100	0 to 6,000	3,000	700.00	1,100.00

INDUSTRIAL POWER SUPPLIES

Regulated Types Available

These industrial type power supplies are built for service and efficiency. All employ husky components that have been selected for their power handling capacity. Controls are arranged so that operation is greatly simplified and a number of safety features are built in for maximum protection of personnel and equipment. Polarity reversing models (as illustrated) can be had at additional cost.

Model	Voltage	Current	Price
F-500	0-500	3 AMP	$800.00
F-6001	0-1000	2 AMP	975.00
F-6002	0-2000	1 AMP	985.00
F-6005-A1-H	0-5000	100 MA	550.00
F-6005-A1-5H	0-5000	500 MA	650.00
F-6005-A1-K	0-5000	1 AMP	1100.00
F-6010-A1	0-10,000	100 MA	800.00
F-6020-A05	0-20,000	50 MA	975.00
F-6050-T	0-50,000	½ MA	600.00
F-6100-T	0-100,000	½ MA	1100.00

100 KV. KILOVOLTMETER

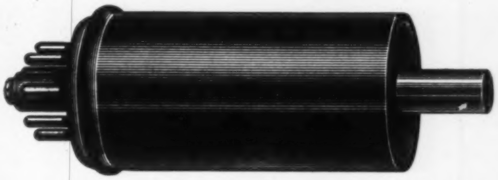
- Read High Voltages Directly with Extra-High Input Impedance.
- Single Instrument Reads Both A.C. and D.C. Voltages!
- Superb Craftsmanship—Portable Oak Case.

Model	Range Kilovolts	Price D.C. Model	Price A.C./D.C. Model
4000	0-25/50	$67.50	$100.00
4000-A	0-100	80.00	125.00
4000-B	0-50/100	85.00	130.00
4000-C	0-10/50/100	95.00	160.00

Other Ranges to Order

1% Mirror scale instrument .... add $50.

HIGH VOLTAGE CONVERTERS



Solves your High Voltage problem in the simplest possible way. Simply connect input to 1½ or 3 V. battery (or low voltage A.C.) and obtain your high voltage output. Output voltage adjustable from zero to 6,000 Volts AC (or DC when rectified). Typical output is 1 Ma. at 130 Volts D.C., 200 Microamperes at 500 Volts and 100 Microamperes at 1,000 Volts, with 3 Volts input. Model 7 MVT as illustrated, plugs in like a radio tube. The Model 10 MVT is not encased.

Model	Primary	Secondary	Price
7 MVT	1 to 4 Volts	0 to 6,000 Volts AC Max.	$12.50
10 MVT	1 to 4 Volts	0 to 6,000 Volts AC Max.	$10.00

TRANSFORMERS, HIGH VOLTAGE

For those who build their own power supplies. These units are small and compact and rated for constant service. Primary designed for 115 Volts 60 Cycle. Only standard models are listed, other voltages and currents available on order.

Model	Voltage	Model	Voltage
1 KVT	1 KV	10 KVT	10 KV
2 KVT	2 KV	15 KVT	15 KV
3 KVT	3 KV	25 KVT	25 KV
5 KVT	5 KV		

PACKAGED POWER SUPPLIES

These conveniently packaged power units will be found ideal for applications requiring minimum size and weight. Features isolated high voltage terminals permitting either the positive or negative side to be grounded. Rectifier tubes are operated from separate filament transformers so that DC output voltage can be varied from zero to full rated value. Selenium rectifier types have extra cells to assure operation under high line voltage or light loading. All standard units have well filtered DC output. Power packs with AC output available on order.

HIGH VOLTAGE
PRECISE MEASUREMENTS CO.

Model	Output Voltage	Current	Model	Output Voltage	Current
05-KV-5MA	500 Volts DC	5 Ma.	20-KV-1MA	20 KV DC	1 Ma.
1-KV-5MA	1 KV DC	5 Ma.	20-KV-5MA	20 KV DC	5 Ma.
2-KV-5MA	2 KV DC	5 Ma.	30-KV-1MA	30 KV DC	1 Ma.
5-KV-1MA	5 KV DC	1 Ma.	30-KV-5MA	30 KV DC	5 Ma.
5-KV-5MA	5 KV DC	5 Ma.	50-KV-1MA	50 KV DC	1 Ma.
10-KV-1MA	10 KV DC	1 Ma.	50-KV-5MA	50 KV DC	5 Ma.
10-KV-5MA	10 KV DC	5 Ma.	75-KV-1MA	75 KV DC	1 Ma.
15-KV-1MA	15 KV DC	1 Ma.	100-KV-1MA	100 KV DC	1 Ma.
15-KV-5MA	15 KV DC	5 Ma.			

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For more information circle **7** on inquiry card.

Gray Instrument Company 160, 187
Green Instrument Company 155
Green Instruments, Inc., Henry J. 60, 119
Greiner Glassblowing Laboratory 114
Grove Valve and Regulator Company 172
Gubelman Publishing Company 70
Gustafson Mfg. Co., G. D. 159
Guthery Machine Tool Corp. 130

H. J. J. Company 192
Hagan Chemicals & Controls, Inc. 41
Hain, Inc. 227
Hammel-Dahl Company Inside Back Cover
Hankison Corporation 50
Hasler-Tel Co., Inc. 199
Hass Instrument Corporation 59, 137
Hayden Company, A. W. 47
Hayward Scientific Glass Corporation 116
Heiland, Div. of Minneapolis-Honeywell Regulator Co. 38-39
Heise Bourdon Tube Company, Inc. 233
Helicoid Gage Division 169
Herron Optical Co. 149
Hickok Electrical Instrument Company 2
Howell Instrument Co. 161
Hughes Aircraft Co. 95
Hughes Co., Kenneth E. 274

Ideal-Aerosmith, Inc. 59
Illinois Testing Laboratories, Inc. 16
Indiana Steel Products Company 136
Indicating Calipers Corp. 92
Industrial Engineering Corporation 171, 237
Industrial Instruments, Inc. 62, 63, 77, 92, 129, 188
Industrial Test Equipment Co. 156
Instrument Corp. 104
Instrument Laboratories 72
Interelectronics Corp. 229
International Optical Company, Inc. 151
International Radiant Corporation 98
International Rectifier Corporation 181

Jaegers Optical Corp., A 147
J-B-T Instruments, Inc. 254
Johnson Service Company 215
Johnson-Williams, Inc. 111
Jones Optical Works, A. D. 147
Joy Manufacturing Company 78
Judson Bigelow, Inc. 68

Karn Chemical Equipment Company 224
Kates Company, W. A. 277
Kato Engineering Company 113
Kay Lab (KIN TEL) 35
Keller, Jr., Hugo P. 122
Kessler Co., Frank 230
KIN-TEL (formerly Kay Lab) 35
King Engineering Corporation 137
Kirk and Blum Mfg. Co. 64
Kistler Instrument Corp. 174
Koehler Instrument Co., Inc. 57
Kollmorgen Optical Corporation 150
Kulka Electric Mfg. Co., Inc. 205

Landsverk Electrometer Co. 178
Lehigh Chemical Company 128
Levy & Company, Max 191
Lewis Engineering Co. 45
Lewis Spring & Manufacturing Company 4
Librascope, Inc. 1
Lindberg Products Company 50
Ling Electronics Inc. 242
Littlefuse, Inc. 279
Los Angeles Scientific Instrument Co. 159
Lynn, Robert M. 227

Magnaflux Corporation 20
Magnetic Research Corp. 134-135
Magnetrol, Inc. 124
Manning, Maxwell & Moore, Inc. 28-29
Mansfield & Green 170, 173
Marsh Instrument Co. 173
Marshall Instruments, Inc. 222
Marshalltown Manufacturing Co. 175
Marx Co., Clarence J. 208
Mason-Neilan Division 243
Maymer Corporation 146
McLean Engineering Labs. 18
Measurements Corporation 203
Meriam Instrument Co. 164, 234
Mercoid Corporation 173
Mico Instrument Co. 155
Mine Safety Appliances Company Back Cover
Moeller Instrument Company 221
Moore & Company, Samuel 46
Morris Co., J. I. 282
Moseley Co., F. L. 253
Moser Jewel Company 123
Murphy & Miller, Inc. 96

Nash Engineering Company 51
National Instrument Laboratories, Inc. 4, 283
Nester Company, Inc., L. G. 116
Neutronic Associates 162
New Hermes Engraving Machine Corp. 136, 155
Niagara Blower Company 52
North Hills Electric Co., Inc. 74
Northeast Scientific Corp. 24
Northeastern Engineering 83
Norwood Controls 167
Nuclear Measurements Corp. 84

O. K. Machine & Tool Corporation 131
Olympic Instrument Laboratories 284
Opad Electric Company 163
Opto-Metric Tools, Inc. 141
Ormandy & Stollery 218
Owen Laboratories 57, 63

P-W Industries 232
Pacific Optical Corporation 150
Pacific Transducer Corp. 220
Pacific Universal Products Corporation 142
Palmer Thermometers, Inc. 223
Pancro Mirrors, Inc. 141
Parker Appliance Company 32-33
Parr Manufacturing Corp. 117
Pasadena Hydraulics, Inc. 129
PCA Electronics, Inc. 229
Penn Optical & Instrument Co. 149
Permag Corp. 132
Permutit Co. 112
Peschel Electronics, Inc. 244
Petrometer Corporation 125
Phaostron Instrument & Electronic Co. 246
Phillips & Hiss Co., Inc. 128
Photo Research Corp. 176
Physics Research Laboratories 189, 245
Pollak Corporation, Joseph 185
Power Designs Inc. 165
Precise Measurements Company 5
Precision Glass Products Co. 115
Precision Products Company Inc. of Waltham 200
Precision Resistor Co., Inc. 188
Premier Metal Products Co. 65
Probescope Co. 198
Propulsion Development Laboratories 105
Pyrometer Instrument Co. 177

Racine & Company, Inc., Jules 226
Radio Frequency Laboratories, Inc. 133, 202, 288
Ramapo Instrument Company, Inc. 105
Rapid Specialties Company 80
Red Point Corporation 96
Renick Co., L. C. 192
Republic Flow Meters Co. 75, 94, 107, 213, 237, 239
Research Appliance Company 101
Richards Co., Inc., Arklay S. 289
Robbins Aviation 145, 239
Robinson Orifice Fitting Company 151
Rogan Brothers 123

Sanborn Company 19
Sandvik Steel, Inc. 199
Schutte & Koerting Co. 107
Scott Testers, Inc. 155, 159, 190, 217, 218, 252
Security Valve Corp. 237
Servonic Instruments, Inc. 173
Servospeed Div. of Electro Devices, Inc. 145
Servo-Systems Company 194
Shore Instrument & Mfg. Co., Inc. 118
Shurite Meters 153
Sibley Co. 72
Simpson Optical Manufacturing Company 148
Slaughter Co. 216
Slip Ring Co. of America 196
Southern Electronics Corporation 3
Spellman Television Co., Inc. 212
Spectrum Instruments, Inc. 12
Spitfire Tool Co. 127
Sprague Engineering Corporation 238
Sprengnether Instrument Co., Inc., W. F. 193
Standard Cabinet Company 100
States Company 157
Statham Development Corporation 97
Stevens-Arnold Incorporated 183
Stewart Corp., F. W. 195
Sticht Co., Inc., Herman H. 108, 120, 208
Strasbaugh Engineering Co., R. Howard 130
Stupakoff Ceramic & Mfg. Co. 121
Sturtevant Co., P. A. 252
Swartwout Company 34
Swiss American Jewel Bearings Co. 122
Technical Apparatus Builders 163
Technical Associates 179
Technical Charts Incorporated 69
Technical Electronics Corp. 144
Technicians Supply Co. 145
Technique Associates, Inc. 177
Tenney Engineering, Inc. 99
Tensitron, Inc. 295
Testa Manufacturing Company 211
Testing Machines, Inc. 140
Texas Instruments Incorporated 14-15
Thermco Laboratories 110
Thermo Electric Co., Inc. 176, 205, 213, 219
Tigerman Engineering Company 143
Tinsley Laboratories 147
Trio Laboratories, Inc. 65

Uehling Instrument Company 300
Ulanet Company, George 224
Ungar Electric Tools, Inc. 197
Union Switch & Signal Division of Westinghouse Air Brake Company 7
United Instrument Co. 166
United States Gauge, Div. of American Machine and Metals, Inc. 21
Universal Electronics Co. 162
U. S. Gear Corp. 73
Universal General see Universal Relay Corp. 182

Vapor Recovery Systems Company 210
Vari-L Company, Inc. 81
Vector Electronic Co. 71
Veeder-Root Inc. 85
Vidon, Custom Cases 68
Vitramon Incorporated 67

Wakmann Watch Co., Inc. 225
Wallace & Tiernan Incorporated 138
Waterman Products Co., Inc. 10-11
Waugh Engineering Company 106
Waxon-Carboff, Inc. 69
Weiss & Son, Inc., Albert A. 220
Weksler Thermometer Corporation 222
Wiancko Engineering Company 168
Wilder, Inc., R. S. 197
Worley Jewel Co., John 122

Zeiss, Inc., Carl 148
Zenith Electric Co., Inc. 226
Zenith Optical Laboratory 151
Zernickow Co., O. 209

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NEW SERVO-RATIO MULTIMETER

Combines all the functions of an AC-DC voltmeter, ohmmeter and AC-DC ratiometer in one compact portable unit

Here is a new, highly accurate test instrument designed to make life easier for those who work with computers and other electronic and electrical devices. It measures AC-DC ratios, absolute AC-DC voltages and resistance. You can also measure the gain of operational amplifiers using the 0° phase output provided.

The Servo-Ratio Multimeter computes voltage ratios by dividing the voltage to be measured by the reference voltage obtained from the computer. It is a high-impedance instrument and utilizes a motor-driven, position-type servo mechanism. Average time to obtain a reading is three seconds. Simplification and reliability are obtained through the use of printed circuits.

The front panel contains a four-digit illuminated drum counter for readout, phase or polarity indicating lights, function switch, ON-OFF switch, range switch, 0° phase ratio selector, input terminals and 0° phase output terminals.

The Servo-Ratio Multimeter is compact and easy to handle. It has an aluminum case and weighs only 10 pounds. The instrument can be operated in a horizontal or vertical position and has a unique carrying handle that serves as a tilt-stand when the unit is used horizontally. Write for Product Description 2005.

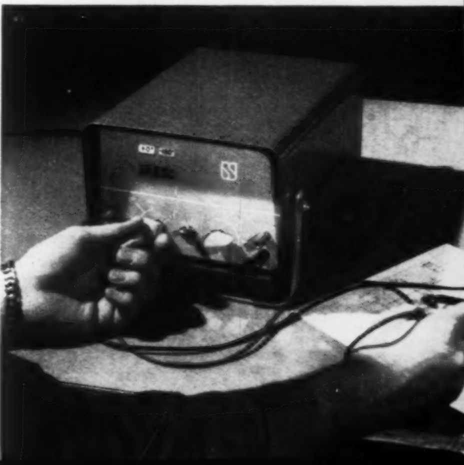
SPECIFICATIONS

Power Consumption: 50 Watts, 110 Volts, 60 cps.
Reference Voltage: DC or 60 cps AC; ± 10 Volts to ± 100 Volts across 8.7K Ohms Load.

Functions	Range
Ratio, AC	0.001 to 1.000 ± 0.1% in 1 range
Ratio, DC	0.001 to 1.000 ± 0.1% in 1 range
60 cps AC Voltage	1 Volt to 1000 Volts full scale ± 1.0% in 4 ranges
DC Voltage	1 Volt to 1000 Volts full scale ± 1.0% in 4 ranges
Ohms	10K Ohms to 10 Megohms full scale ± 1.0% in 4 ranges
Gain	0.01 to 1000 in 4 ranges

PORTABLE AND COMPACT—Weighs only 10 pounds. Size: $7\frac{7}{8}''$ x $5\frac{1}{2}''$ x 11-13/16″.

SIMPLIFIES TESTING—Eliminates need for many other instruments. Has digital readout counter.



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FREQUENCY STANDARDS

*3⅛" high
400 - 1000 cy.

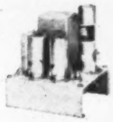
PRECISION FORK UNIT
TYPE 50

Size 1" dia. x 3¾" H. Wght., 4 oz.*

Frequencies: 240 to 1000 cycles
Accuracies:—
Type 50 (±.02% at —65° to 85°C)
Type R50 (±.002% at 15° to 35°C)
Double triode and 5 pigtail parts required
Input, Tube heater voltage and B voltage
Output, approx. 5V into 200,000 ohms

FREQUENCY STANDARD
TYPE 50L

Size 3¾" x 4½" x 5½" High
Weight, 2 lbs.



Frequencies: 50, 60, 75 or 100 cycles
Accuracies:—
Type 50L (±.02% at —65° to 85°C)
Type R50L (±.002% at 15° to 35°C)
Output, 3V into 200,000 ohms
Input, 150 to 300V, B (6V at .6 amps.)

*3½" high
400 to 500 cy.
optional

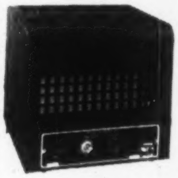
PRECISION FORK UNIT
TYPE 2003

Size 1½" dia. x 4½" H. Wght. 8 oz.*

Frequencies: 200 to 4000 cycles
Accuracies:—
Type 2003 (±.02% at —65° to 85°C)
Type R2003 (±.002% at 15° to 35°C)
Type W2003 (±.005% at —65° to 85°C)
Double triode and 5 pigtail parts required
Input and output same as Type 50, above

FREQUENCY STANDARD
TYPE 2005

Size, 8" x 8" x 7¼" High
Weight, 14 lbs.



Frequencies: 50 to 400 cycles
(Specify)
Accuracy: ±.001% from 20° to 30°C
Output, 10 Watts at 115 Volts
Input, 115V. (50 to 400 cycles)

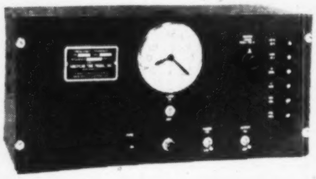
FREQUENCY STANDARD
TYPE 2007T
TRANSISTORIZED

Size 1½" dia. x 4½" H. Wght. 7 ozs.*

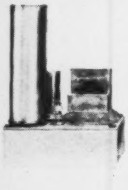
Frequencies: 240 to 1000 cycles
Accuracies:—Same as 2003, above
Type 2007S—Silicon type
Input, 28V.
Output, Multitap, 75 to 100,000 ohms
*3½" in 2007S, 400 to 800 cycles.

FREQUENCY STANDARD
TYPE 2121A

Size
8¾" x 19" panel
Weight, 25 lbs.



Output: 115V
60 cycles, 10 Watt
Accuracy:
±.001% from 20° to 30°C
Input, 115V (50 to 400 cycles)



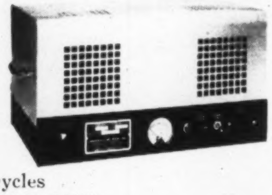
FREQUENCY STANDARD
TYPE 2001-2

Size 3¾" x 4½" x 6" H., Wght. 26 oz.

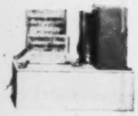
Frequencies: 200 to 3000 cycles
Accuracy: ±.001% at 20° to 30°C
Output: 5V. at 250,000 ohms
Input: Heater voltage, 6.3 - 12 - 28
B voltage, 100 to 300 V., at 5 to 10 ma.

FREQUENCY STANDARD
TYPE 2111C

Size, with cover
10" x 17" x 9" H.
Panel model
10" x 19" x 8¾" H.
Weight, 25 lbs.



Frequencies: 50 to 1000 cycles
Accuracy: (±.002% at 15° to 35°C)
Output: 115V, 75W. Input: 115V, 50 to 75 cycles.



ACCESSORY UNITS
for TYPE 2001-2

L —For low frequencies
multi-vibrator type, 40-200 cy.
D—For low frequencies
counter type, 40-200 cy.
H—For high freqs, up to 20 KC.
M—Power Amplifier, 2W output.
P —Power supply.

This organization makes frequency standards within a range of 30 to 30,000 cycles. They are used extensively by aviation, industry, government departments, armed forces—where maximum accuracy and durability are required.

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PLEASE SPECIFY TYPE NUMBER

American Time Products, Inc.

580 FIFTH AVENUE, NEW YORK 36, N. Y.

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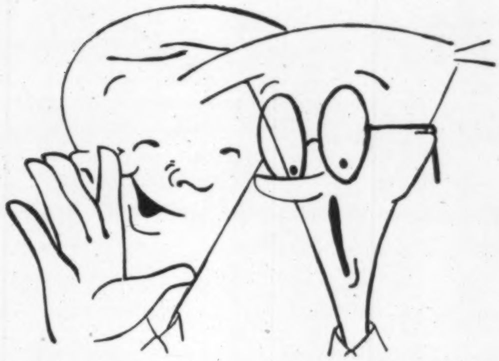

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3	23	43	63	83	103	123	143	163	183	203	223	243	263	283	303	323	343	363	383	403	423
4	24	44	64	84	104	124	144	164	184	204	224	244	264	284	304	324	344	364	384	404	424
5	25	45	65	85	105	125	145	165	185	205	225	245	265	285	305	325	345	365	385	405	425
6	26	46	66	86	106	126	146	166	186	206	226	246	266	286	306	326	346	366	386	406	426
7	27	47	67	87	107	127	147	167	187	207	227	247	267	287	307	327	347	367	387	407	427
8	28	48	68	88	108	128	148	168	188	208	228	248	268	288	308	328	348	368	388	408	428
9	29	49	69	89	109	129	149	169	189	209	229	249	269	289	309	329	349	369	389	409	429
10	30	50	70	90	110	130	150	170	190	210	230	250	270	290	310	330	350	370	390	410	430
11	31	51	71	91	111	131	151	171	191	211	231	251	271	291	311	331	351	371	391	411	431
12	32	52	72	92	112	132	152	172	192	212	232	252	272	292	312	332	352	372	392	412	432
13	33	53	73	93	113	133	153	173	193	213	233	253	273	293	313	333	353	373	393	413	433
14	34	54	74	94	114	134	154	174	194	214	234	254	274	294	314	334	354	374	394	414	
15	35	55	75	95	115	135	155	175	195	215	235	255	275	295	315	335	355	375	395	415	
16	36	56	76	96	116	136	156	176	196	216	236	256	276	296	316	336	356	376	396	416	
17	37	57	77	97	117	137	157	177	197	217	237	257	277	297	317	337	357	377	397	417	
18	38	58	78	98	118	138	158	178	198	218	238	258	278	298	318	338	358	378	398	418	
19	39	59	79	99	119	139	159	179	199	219	239	259	279	299	319	339	359	379	399	419	
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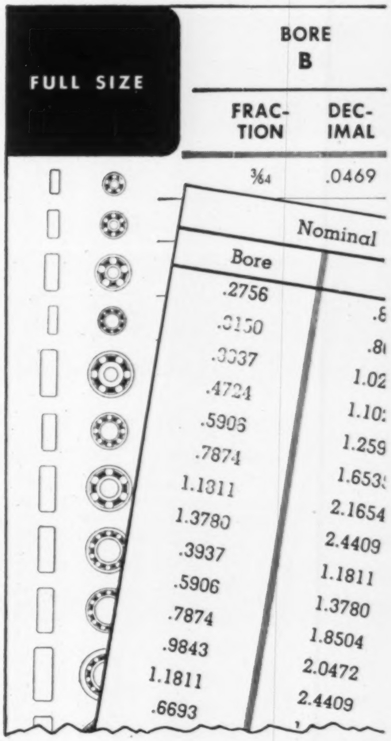

FULL SIZE	BORE B FRACTION	BORE B DECIMAL
	3/64	.0469

Bore	Nominal
.2756	.8
.3150	.8
.3937	1.02
.4724	1.10
.5906	1.259
.7874	1.653
1.1811	2.1654
1.3780	2.4409
.3937	1.1811
.5906	1.3780
.7874	1.8504
.9843	2.0472
1.1811	2.4409
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Waterman PRODUCTS

S-14-C
S-4-C
S-5-C
S-14-B
S-15-A

S-14-C COMPUTER POCKETSCOPE is a portable oscilloscope, especially designed for computers and business machine service. Lightweight and small size together with simplicity of operation makes this instrument IDEAL for field servicing. In addition . . . signal amplifier with 0.35 μs pulse rise from dc, with signals of 1 mv observable . . . calibrated fixed sweeps and continuously adjustable linear time base from 20 μs to 2 seconds . . . 5x stable time base expansion with complete parading for accurate pulse position . . . sync limiting . . . special intensification circuits permits observation of pulses shorter than 10 μs at repetition rates slower than 1 pps . . . accessory attenuating and amplifying probes . . . make this instrument a MUST for computer type service.

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S-5-C LAB PULSESCOPES are JANized equivalents to the Gov't Model AN/USM-24C. These portable, AC, wide band-pass laboratory oscilloscopes are ideal for pulse as well as general purpose measurements. Internal delay of 0.55 us permits observation of pulse leading edge. Includes precision amplitude calibration, 10X sweep expansion, internal trace intensity time markers, internal trigger generators and many other features. Video amplifier .06 v RMS/inch . . . pulse rise time of 0.07 us or response to 11 mc . . . 5 to 50,000 us/in. triggered or repetitive sweep . . . internally generated markers from 0.2 to 500 us . . . trigger generator from 50 to 5000 pps. for internal and external triggering. Operates from 50 to 400 cycles at 115 volts AC.

S-11-A INDUSTRIAL POCKETSCOPE is a small, compact, and lightweight instrument for observing electrical circuit phenomena. The flexibility of the POCKETSCOPE permits its use for ac measurements as well as for dc. The vertical and horizontal amplifiers are capable of reproducing within—2 db from dc to 200 kc with a sensitivity of 0.1 v rms/in . . . repetitive time base from 3 cycles to 50 kc continuously variable throughout its range . . . variations of input impedance, line voltage or controls do not "bounce" the signal—the scope stabilizes immediately.

S-14-A HI-GAIN POCKETSCOPE provides the optimum in oscilloscope flexibility for analysis of low-level electrical impulses. Vertical and horizontal channels: 10 mv rms/inch with response within —2 db from dc to 200 kc and pulse rise of 1.8 μs . . . non-frequency discriminating attenuators and gain controls with internal calibration of trace amplitude . . . repetitive or trigger time base with linearization from ½ cycle to 50 kc with ± sync or trigger.

S-14-B WIDE BAND POCKETSCOPE is ideal for investigations of transient signals, dc signals, aperiodic pulses or recurrent waveforms. Vertical channel: 50 mv rms/in. within—2 db from dc to 700 kc . . . pulse rise time of 0.35 μs. Horizontal channel: 0.15 v rms/in. within—2 db from dc to 200 kc . . . pulse rise of 1.8 μs. Attenuators and gain controls are non-frequency discriminating . . . trace amplitude calibration . . . repetitive or triggered time base from ½ cycle to 50 kc . . . ± sync or trigger . . . trace expansion, filter graph screen and many other features.

S-15-A POCKETSCOPE is a portable, twin tube, high sensitivity oscilloscope with two independent vertical as well as horizontal channels. It is indispensible for investigation of electronic circuits in industry, school and laboratory. Vertical channels 10 mv rms/in. with response within—2 db from dc to 200 kc and pulse rise time of 1.8 μs . . . horizontal channels 1 v rms/in. within—2 db from dc to 150 kc . . . non-frequency discriminating controls . . . internal signal amplitude calibration . . . linear time base from ½ cycle to 50 kc, triggered or repetitive, for both horizontal channels.

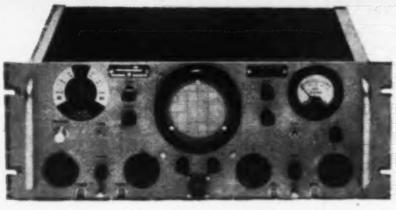
S-12-B RAKSCOPE admirably fills the need for a small oscilloscope of wide versatility. With all the features of the S-11-A POCKETSCOPE, the RAKSCOPE is JANized (Gov't Model No. OS-11), and has many additional advantages; the sweep, from 5 cycles to 50 kc, is either repetitive or triggered . . . vertical and horizontal amplifiers are 50 mv rms/inch with band-pass from 0 to 200 kc . . . special phasing circuitry for frequency comparison.

For more information circle **11** on inquiry card.

Write for your complimentary copy of "POCKETSCOOP" • Official Waterman publication.

POCKETSCOPES® PULSESCOPES® RAKSCOPES® PANELSCOPES® RAYONIC TUBES®

SYSTEMS CONCEPT



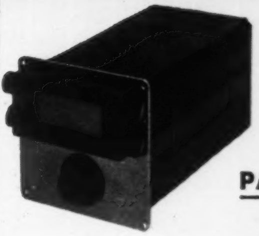
RAKSCOPE S-12-C

The Waterman SYSTEMS RAKSCOPE, S-12-C series is a rack mounted oscilloscope with SYSTEMS CONCEPT. Systems concept is a basic means for rapid monitoring of desired signals with minimum operative effort and without the use of auxiliary switching or jack panels. S-12-C series provide the following:

1. BASIC UNIT—The basic S-12-C SYSTEMS RAKSCOPE is a complete combination systems monitoring and trouble-shooting oscilloscope with outstanding physical and electrical characteristics. The RAKSCOPE occupies but 7 inches of a standard 19" rack and extends only 10 inches behind the front panel. Identical vertical and horizontal amplifiers are DC type having rise times better than 0.35 usec, and 50 or 71 millivolts rms per inch of deflection respectively. Signal calibration method uses a direct reading accurate meter. Time base sweeps are from ½ cps to 50KC in trigger or repetitive operation. Sync from internal or external sources provide stable operation by means of new sync lockout circuits. Special plug-in elliptical sweep circuit for easy phase and frequency checks greatly increase its systems utility. Construction is ruggedized throughout. Tube type options include standard commercial, ruggedized commercial or ruggedized military. Operable from 50 to 400 cycles.

2. CUSTOM MODIFICATION—Desired flexibility is obtained with the optional signal input selector. For the first time it is possible to select up to eleven different signal sources with the necessary built-in attenuation (supplied by us or by you) for each source. Thus the entire switching panel can be omitted from an overall system resulting in circuit and space economics. Standard elliptical sweep is 60 cycles, but plug-in units for other frequencies can be supplied. Accessories such as attenuating, direct, and amplifying probes are available.

Improve your existing or contemplated systems by including the S-12-C SYSTEMS RAKSCOPE as an integral part. Your local Waterman representative is ready to assist you in determining specific requirements.



PANELSCOPE®

The Waterman PANELSCOPE is a custom-built cathode ray tube oscilloscope, with simplified operation, and yet available at a low price. The PANELSCOPE concept provides for the following:

(1) MINIATURIZATION—Panel space required is only 5¼" x 5-3/16"—depth is 10" and the weight is less than 7 lbs. The PANELSCOPE can be installed in practically any equipment—mobile or stationary—air, sea, or land—military or commercial.

(2) SIMPLICITY OF OPERATION—Twist of a single rotary switch provides a synchronized pattern of desired incoming signal (up to 11 circuits) against proper linear time base. This is ideal for monitoring and trouble shooting, as it removes the need of fiddling with knobs as is done now on general purpose oscilloscopes. The static controls, such as beam, focus, positioning, and graticule brightness are located in tube escutcheon.

(3) CUSTOM DESIGN—A wide variety of—signal amplifiers with response from dc to megacycles and sensitivities from 5 millivolts—synchronized or triggered linear time base generators from ½ cycle (and lower if need be) to 2 microseconds—can be specified by you to fit your needs for particular equipment.

(4) PARTIAL KIT FORM—the PANELSCOPE comes fully wired and tested with chosen signal amplifier, linear time base generator and attendant sync. amplifier. The desired signal attenuators, frequency and amplitude determining components, and method of synchronization can be installed either by us or by you.

(5) POWER REQUIREMENT—Less than 10 watts of line power for built-in high voltage supply—The required B+ and heater current as selected by your requirements. For those cases where B+ and heater power is not available, auxiliary power pack can be supplied.

There is a place in your equipment for Waterman PANELSCOPE, a custom built oscilloscope at production prices, although your needs may be but one or two. Ask for specification sheets either from our representatives or direct from the factory.

RAYONIC CATHODE RAY TUBES BY WATERMAN

TUBE	PHYSICAL DATA		STATIC VOLTAGE		DEFLECTION*		LIGHT OUTPUT**
	FACE	LENGTH	A3	A2	VERT	HOR	
3JP1	3"	10"	3000	1500	111	150	40
3MP1	3"	8"		750	99	104	4
3RP1	3"	9.12"		1000	61	86	5
3SP1	1.5x3"	9.12"		1000	61	86	5
3XP1	1.5x3"	8.875"		2000	33	80	22

**Deflection in volts per inch.*
***Light output of a line in millifoot lamberts per millimeter at line width not to exceed .65mm.*

The basic properties of the cathode ray tube that concern the designer or the user are: deflection sensitivity, unit line brightness, line width, static voltage requirements and physical size. A comparison between cathode ray tubes manufactured by Waterman Products Company is shown in the table adjoining. These tubes are available in P1, P2, P7 and P11 phosphors. 3JP1, 3JP2, 3JP7, 3RP1, 3SP1 and 3XP1 are available as JAN tubes.

WATERMAN PRODUCTS

WATERMAN PRODUCTS CO., INC.

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Subminax® RF connectors to set the highest standards of reliability for miniature components

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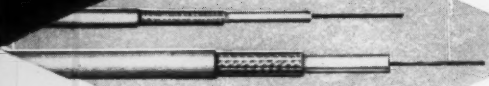
Subminax cables—polyethylene or Teflon—mate with Subminax connectors—complete the reliability circuit



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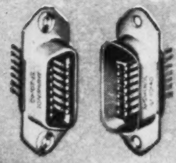
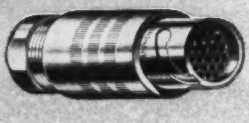
Amazing Micro-Ribbon connectors use flexible "ribbon" contacts, "wedge" principle for quality performance



A-N CONNECTORS

Miniature AN-type 165 series connectors are widely used in military and commercial equipment



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The ONLY electronic filters with D.C. response

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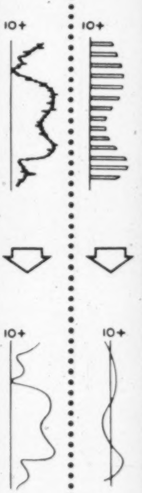
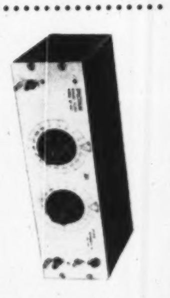
For Telemetry, Geophysics, Control and Acoustical Studies
Standard High-Pass/Low-Pass cut-off Tunable
0.2-20,000 cycles/sec. Instantly inverted without Detuning.





Cabinet or Rack Panel Styles Available
Also custom step-tuned ANALOG filters, 160DB/octave cut-off rate inquiries invited.

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TOP HAND

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Maintenance
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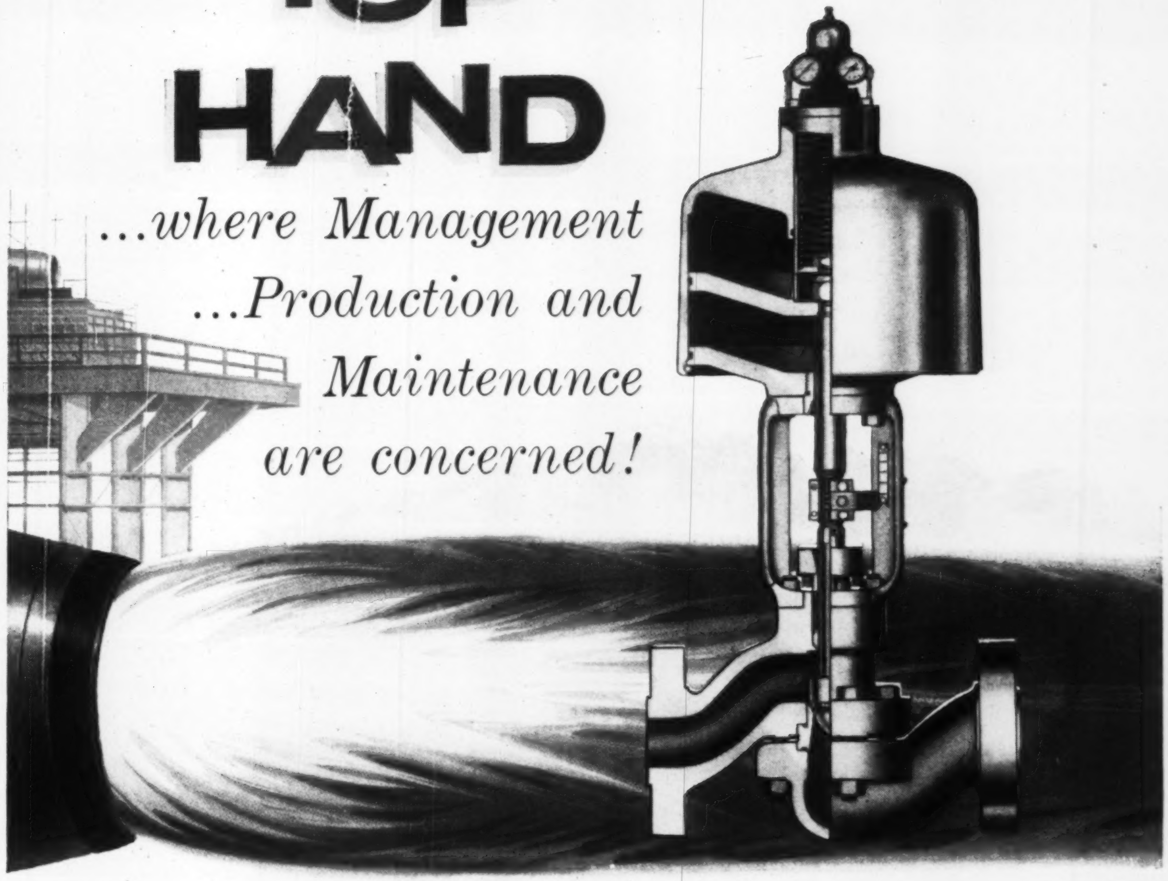

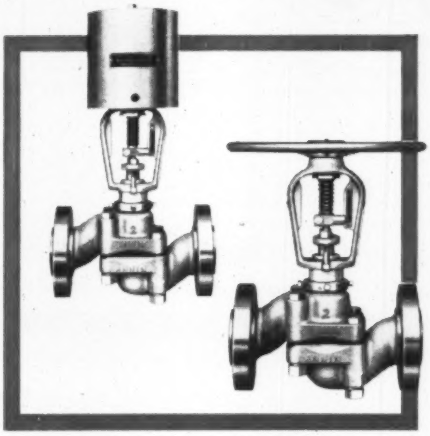

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ANNIN

THE ANNIN COMPANY
DIVISION OF THE ANNIN CORPORATION
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Control **VALVES**

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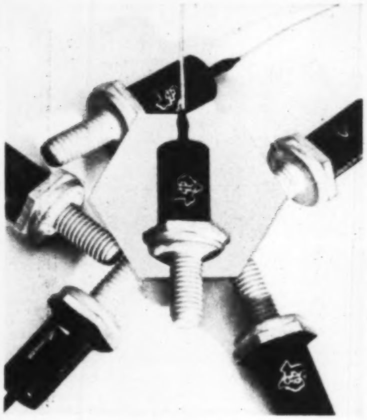

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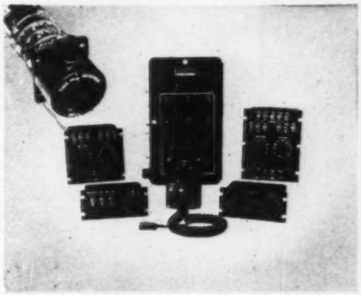

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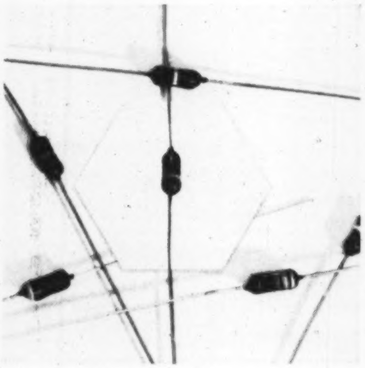

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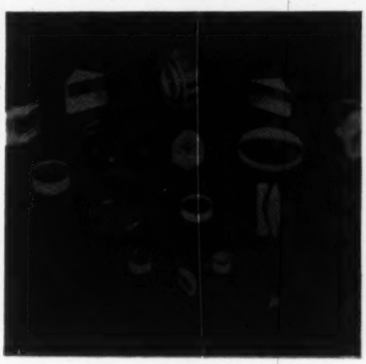

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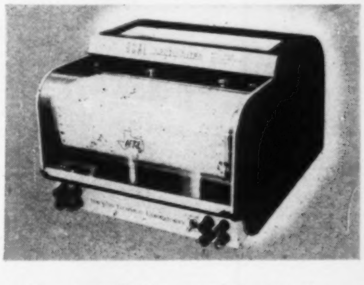
INDUSTRIAL INSTRUMENTATION



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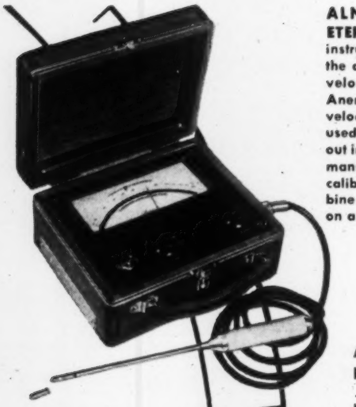

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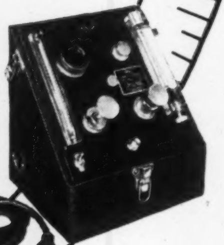

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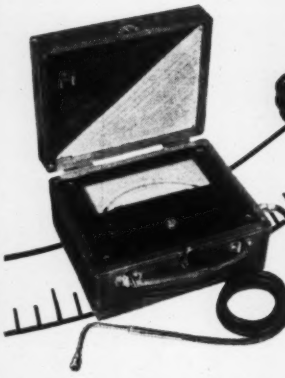


ALNOR TYPE 2300 SURFACE PYROMETER . . . sets a new high in precision measurement of low surface temperatures. Special design, from Alnico magnet to the finest, quick reacting thermocouple, assures unfailing accuracy . . . speed and dependability. This is a self-contained, sturdy unit—easily carried and used anywhere on a wide variety of applications. Direct reading, six-inch mirrored scale is easily read . . . quickly understood. The instrument is available in 5 Fahrenheit scale ranges with a span as small as only 150°.

for precise measurement of temperature, air velocity and dew point!

If your measurement problems involve any of these, choose a precision instrument from the Alnor line. Unexcelled for unfailing accuracy, Alnor instruments have proved their superiority in a broad range of laboratory, production-line and field applications. The units shown are but a few from a full line of rugged precision instruments that have many unique patented features that mean greater accuracy . . . a more practical, trouble-free solution to your measurement problems.

Follow the lead of those who know quality best . . . select Alnor for your laboratory or industrial instrumentation.

Alnor ILLINOIS TESTING LABORATORIES
420 N. LA SALLE ST. • CHICAGO 10, ILL.

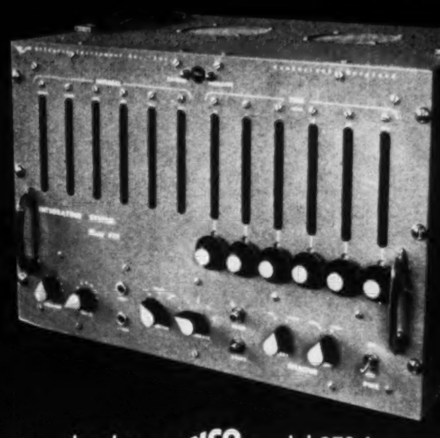
PRECISION INSTRUMENTS FOR EVERY INDUSTRY

Illinois Testing Laboratories, Inc.
Rm. 537, 420 N. La Salle Street, Chicago 10, Illinois
Send complete information on the following:
☐ Electronic Controller ☐ Dew Point Indicator
☐ Type 2300 Surface Pyrometer ☐ Thermo-Anemometer
☐ Send complete catalog

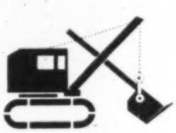
Name...
Address..
City.................................Zone......State.......

For more information circle 16 on inquiry card.

TIME AND INTEGRAL *displayed instantly*

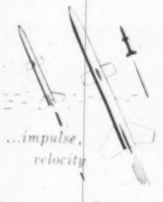


by the ALINCO model 270 Integrating System

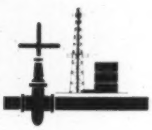


...power, average stress

THERE'S no need for planimeters or tedious arithmetic when you use the all-electronic Model 270. Designed to compute time integrals in studies of transient phenomena and in statistical quality control, the Model 270 counts at the rate of 10,000 per second. With such resolution, rapidly changing phenomena as short as 10 milliseconds in duration can be integrated to a higher degree of accuracy than heretofore possible. Convert *any* phenomenon—torque, stress, velocity, pressure, force, flow, acceleration, etc.—to a d.c. analog signal and feed it to the Model 270. Counting begins by preset signal level or by closing contacts, and stops by signal decay or by preset time (in increments of 0.0001 sec.). When the test is finished, both time and total integral are displayed on twelve digital counters. The answer often represents a ten-fold increase in accuracy over other integrating methods, and you have it *immediately*, whether your test is in the lab or out in the field. Remember, too, that ALINCO supplies a variety of high-performance instruments which can speed your projects to completion with the highest accuracies obtainable. Send for detailed literature on these guaranteed, field-proven instruments.

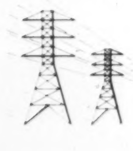


...impulse, velocity



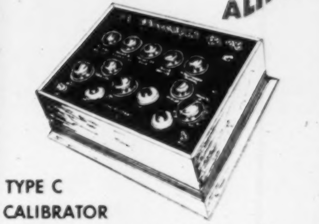
...quantity, average pressure

...distance

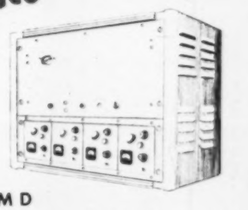


...energy

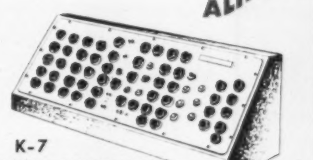
For more information circle **17** on inquiry card.



TYPE C CALIBRATOR
to calibrate load and pressure cells



SYSTEM D
galvanometer amplification system



K-7 ERROR COMPUTOR
gives magnitude and location of transducer system error

ALINCO

ALLEGANY INSTRUMENT CO. INC.

EASTERN DIVISION:
1091 Wills Mountain
Cumberland, Maryland
WESTERN DIVISION:
1052 West 6th Street
Los Angeles 17, Cal.

Cool That Cabinet—Save Sensitive Components

GENERAL FEATURES

- Pressurizes Cabinet With Filtered Air
- Rubber Isolated Motors For Quieter Operation
- Widely Accepted for Use In Military Equipment
- Maximum Air Delivery For Efficient Filter Action

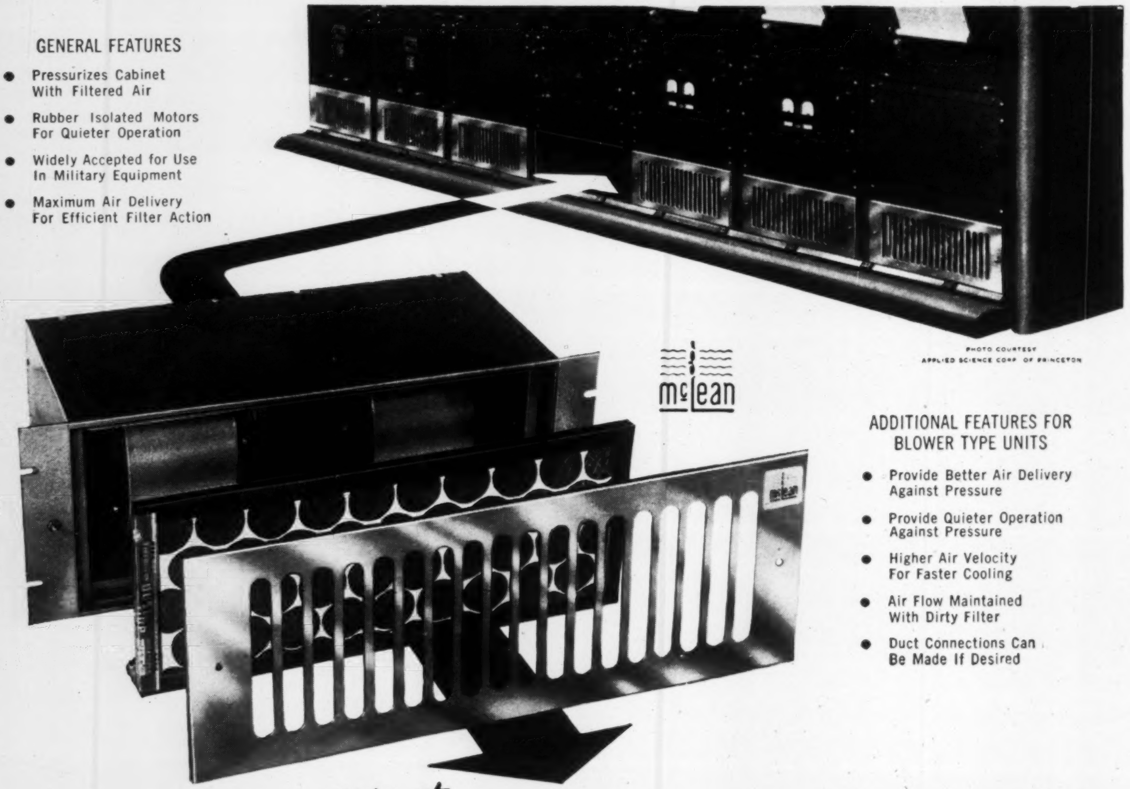


PHOTO COURTESY
APPLIED SCIENCE CORP OF PRINCETON

ADDITIONAL FEATURES FOR BLOWER TYPE UNITS

- Provide Better Air Delivery Against Pressure
- Provide Quieter Operation Against Pressure
- Higher Air Velocity For Faster Cooling
- Air Flow Maintained With Dirty Filter
- Duct Connections Can Be Made If Desired

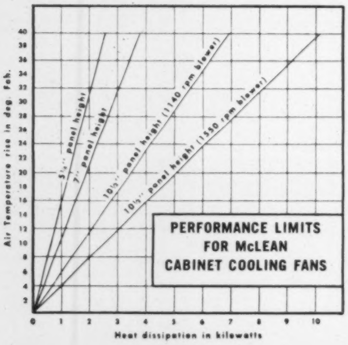
use McLEAN *Cabinet Cooling* FANS and BLOWERS*

*Pat. Applied For

RACK MOUNTED FOR EASY ASSEMBLY • FIT STANDARD 19" RACKS

THREE STANDARD MODULAR PANEL HEIGHTS COVER WIDE RANGE OF AIR DELIVERIES

Excessive or fluctuating temperatures in electronic racks make thousands of tubes die young . . . make crystals, transistors and sensitive electronic equipment perform erratically. System failure at critical times is disastrous . . . replacement costs are high. That is why leading manufacturers install McLean Fans and Blowers in Computers, Control Systems, Data Processing Systems, etc. These small packaged units pressurize the cabinet with cool filtered air, keeping dust out. They are complete in one unit and ready for use. Standard RETMA notching allows mounting on rack . . . no cutting or fitting is necessary. All units contain an easily replaceable filter. Smart stainless steel grilles add beauty and eliminate the necessity of matching cabinet finishes.



PERFORMANCE LIMITS FOR McLEAN CABINET COOLING FANS

SPECIFICATIONS

PANEL HEIGHT	MODEL	DEPTH	CFM	REMARKS	TYPE
5¼"	2A300	7½"	80	Standard Rack Mounting	Blower
	2E300	7½"	80	For Trim Strip Racks	Blower
	2B300	7½"	150	Basic Model	Blower
	3E40	5⅞"	190	For Special Clearance	Propeller
	2P408	11⅛"	300	Inside Height 7"	Blower
7"	2E55	8¼"	250	Basic Model	Propeller
	2E408	10"	300	Basic Model	Blower
	2A408	8¼"	300	No Projecting Outlets	Blower
	2E408V	8¾"	300	Vertical Discharge	Blower
	2E55H	8¼"	310	400 cps Model	Propeller
10½"	2E80	8⅛"	500	Basic Model	Propeller
	2B610	13¼"	550	Slow Speed Model	Blower
	2A610	13¼"	800	22" Rack Width	Blower
	2E610	13¼"	800	Basic Model	Blower

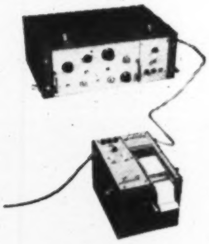
MODIFICATIONS OF ABOVE MODELS CAN BE MADE TO 24" OR SPECIAL WIDTH RACKS TO ORDER

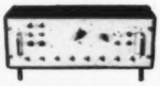
FREE OUR NEW CONDENSED CATALOG! *SEND FOR IT TODAY.*

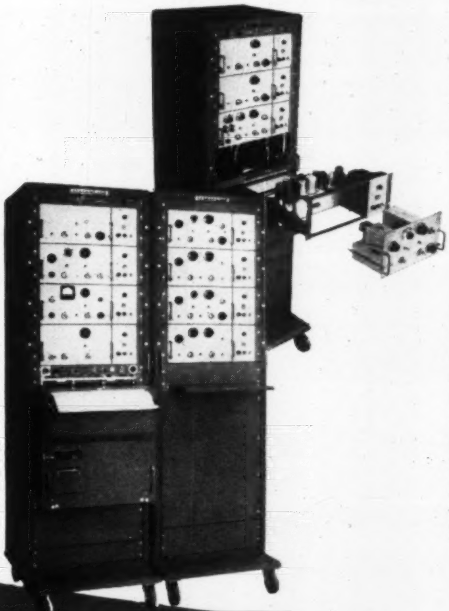
McLEAN ENGINEERING LABS. PRINCETON, NEW JERSEY
PHONE: PRINCETON 1-4440

Agents in all principal electronic manufacturing areas.

For more information circle **18** on inquiry card.







SYSTEMS ①

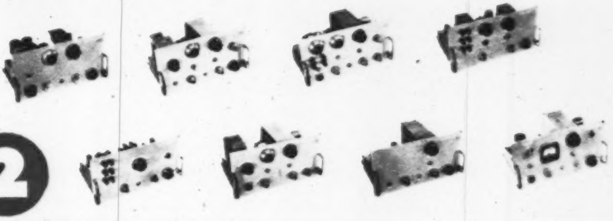
BASIC "150" assemblies housed in either vertical mobile cabinets or separate portable cases are available in 1-, 2-, 4-, 6- and 8-channel models. Each is equipped with driver amplifiers of current feedback design and regulated power supplies for *each* channel, and a recorder featuring *nine* extremely accurate paper speeds on 2- to 8-channel models, five on single channel units. Appropriate plug-in preamplifiers quickly and efficiently equip a basic assembly for recording virtually any 0-100 cps phenomena.

new 6- and 8-channel analog readout systems

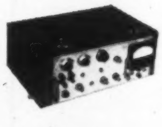
In addition, complete Sanborn systems from 2- to 8-channels are available for recording analog computer outputs. These are equipped with dual-channel DC amplifiers, for single-ended or push-pull signals — input impedance 5 megohms each input lead to ground — drift less than 0.5 mm/hr. — frequency response down 2 db at 60 cycles for all amplitudes to 4 cm peak to peak. Newest of the computer readout recorders are the 6- and 8-channel console systems (8-channel illustrated — "A" at left). The Model 183 Programmer in a Model 184 case ("B" at left) is optional for use with the 6- and 8-channel consoles. The Programmer automatically turns on chart drive, feeds calibrated signals to all channels, reads computer DC levels, determines the length of record, and shuts off the paper drive.

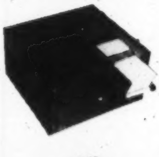
SANBORN

oscillographic recording equipment



③ UNIT INSTRUMENTS





All Sanborn Preamplifiers and Recorders, as well as various other units, are available separately for specialized applications or use as "original equipment" in other apparatus. Instruments include the Model 150-300/700 Wide Band Driver Amplifier and Power Supply, for use with low power galvanometer elements, a 'scope and/or panel meter. When equipped with suitable "150" preamplifier, this amplifier provides a portable indicator for strain, force, pressure, temperature, AC watts, audio level, etc. Other units include the Model 150-1900 Master Oscillator Power Amplifier: Model 150-3100 Triplexer; Model 601 and 602 galvanometers; Model 150-2900 Dual-Channel DC Amplifier.

② PREAMPLIFIERS

A choice of *twelve* "150 Series" plug-in preamplifiers is now available, to equip systems for any of numerous recording problems. Improved control of input signals results from attenuator ratios of 1, 2, 5, etc., and calibrated zero suppression on AC-DC, Carrier, and Low Level DC Coupling, Frequency Meter, and Chopper Stabilized DC models. Other "150" preamplifiers include: Servo Monitor, Log-Audio, AC Wattmeter, RMS Volt/Ammeter, 400 cycle Frequency Deviation, and Triplexer.

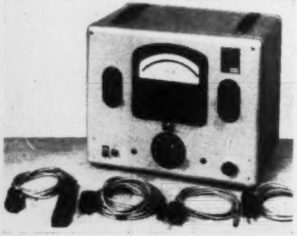
Added to these three aspects of Sanborn Oscillographic Recording Equipment are the basic advantages of inkless recording in true rectangular coordinates, to provide accurate, easily interpreted records; high torque galvanometer (10 ma develops 200,000 dyne cm.); one percent linearity resulting from current feedback driver amplifiers and high torque galvanometers (maximum error is ¼ mm in middle 4 cm of chart, ½ mm across entire chart); controls for timing, manual and remote coding.

Take advantage of the scope and flexibility of Sanborn equipment to answer your recording requirements. Sanborn engineers will be glad to provide further information and application assistance whenever you wish. Contact your local representative or write to the main office below.

SANBORN COMPANY
INDUSTRIAL DIVISION
175 WYMAN ST. WALTHAM 54, MASS.

For more information circle 19 on inquiry card.

MAGNAFLUX CORPORATION offers you industry's broadest range of testing systems and equipment for nondestructive testing

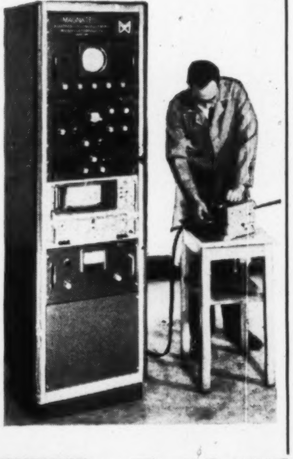


MAGNATEST FM-200 PRECISION MAGNETIC FIELD METER

An extremely sensitive eddy current measuring instrument for DC magnetic fields. Used for many applications in geophysics, magnetic investigations, military use and in nondestructive testing of magnetic materials. Responds to steady state fields and the field of direct current. Measures weak fields in presence of stray fields and determines amount of residual field remaining in a piece after demagnetization.

MAGNATEST FW-400 SERIES NONMAGNETIC ROD, WIRE or TUBE INSPECTION

Detects seams, cracks, concentrated porosity, inclusions, stringers, laps and splits automatically. Finds diameter variation, embrittled areas and scale. Provides completely automatic, high speed production of copper tubing. Inspects aluminum rod for voids, scale and other conditions which cause trouble in drawing or final wire. Designed for heavy industrial use.

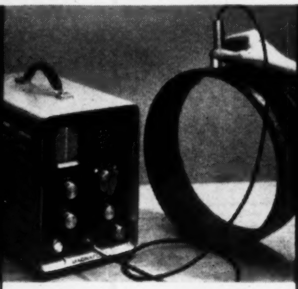


MAGNAFLUX-MAGNAGLO®

The most used method on magnetic metals, for surface and sub-surface defects. Highest production speeds, controlled sensitivity. Biggest to smallest units, including portable and hand type.

ZYGLO® and ZYGLO-PENTREX®

Chiefly for nonmagnetics for defects open to the surface. Fluorescent penetrant, black light. Practically any volume and speed required. Controlled sensitivity. Also portable kits and leak tests.

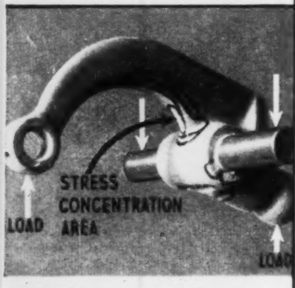


SONIZON®

Ultrasonically measures thickness from one side only in tank walls, cast, formed or welded products, etc. Also discovers sub-surface defects, laminations and lack of bond.

MAGNATEST®

Electronic eddy current instruments. Numerous types with industry-wide application. Conductivity, magnetic fields, dimension, hardness, alloy, coating thickness, cracks, etc.



STRESSCOAT®

Brittle coating stress analysis tool. Helps in designing stronger parts with less weight. Shows stress distribution, direction, and stress level over entire part.

SPOTCHECK®

Low cost, spray-on red dye penetrant inspection for maintenance or sampling on small surface areas.

STATIFLUX®

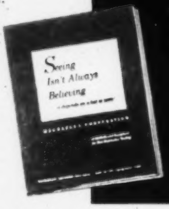
Electrified particle inspection for cracks and pores in nonconductive materials—ceramics, glass, enamels, plastics, etc.

PARTEK®

Filtered particle inspection for cracks in unsintered powdered metal compacts, ceramics and porous solids, including concrete.

KEEP UP TO DATE ON M TEST SYSTEMS—

The methods and latest developments. Call in a Magnaflux Engineer . . . or write for copy of "Seeing Isn't Always Believing" containing briefed information on *all* Magnaflux test systems.



MAGNAFLUX CORPORATION

THE HALLMARK OF QUALITY IN NONDESTRUCTIVE TESTING

Take Your inspection problems to the House of Answers

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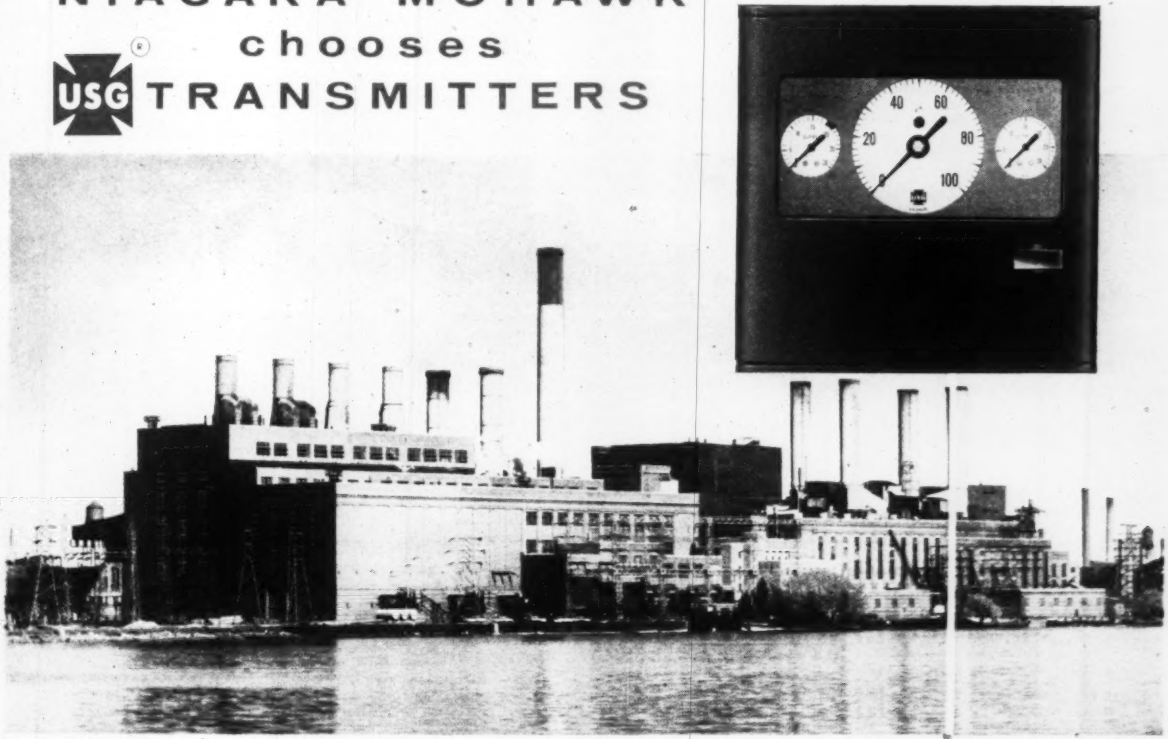
Detroit 11 • Dallas 19 • Los Angeles 22

For more information circle **20** on inquiry card.

...for central intelligence reporting

NIAGARA MOHAWK
chooses
USG® TRANSMITTERS



Relaying of operating condition information . . . a most important job if the numerous controllers, totalizers and actuators are to function accurately . . . is the task intrusted to USG pneumatic transmitters in the new unit #67 at the Huntley Station of Niagara Mohawk.

They were selected by Hagan Chemicals & Controls, Inc. to work as components of the Hagan complete combustion control system. The sensitivity of the USG transmitters . . . 0.1% of full scale . . . plus sturdy, dependable construction, were important factors in their selection.

Temperature and pressure intelligence relayed by the transmitters is picked up where necessary by USG 3½″ duplex receiver gauges, similarly chosen for dependable performance.

These instruments are part of a line of control instruments that includes the USG pilot, used and specified by many of the largest control valve manufacturers.

Information on these and other instruments for indication and control is obtainable from your USG distributor or the factory. For transmitter, pilot or receiver gauge data, ask for Catalog 510.

STATISTICS ON THE NEW UNIT 67
AT THE HUNTLEY STATION

Capacity 1,470,000 lbs./hr.
Pressure—2400 P.S.I.
Temperature—1050° F.
1000° F. Reheat
Rating—200,000 KW
Combustion Control by Hagan Chemicals & Controls, Inc.
Engineering Design—Niagara Mohawk Power Corp.

Find Your Nearest Distributor In The 'Yellow Pages'

USG
UNITED STATES GAUGE
Division of American Machine and Metals, Inc.
Sellersville, Pa.

Home of the SUPERGAUGE

MORE THAN 50,000 TYPES OF GAUGES • SUPERGAUGES • SOLID FRONT GAUGES • RECEIVER GAUGES • TEST GAUGES • RECORDERS • CONTROLLERS • TRANSMITTERS • PSYCHROMETERS • AVIATION INSTRUMENTS

For more information circle **22** on inquiry card.

BRUSH ELECTRONICS

VIBRATION & NOISE INSTRUMENTATION

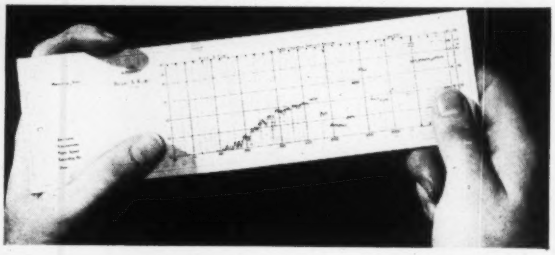


Chart record produced by the Brush Spectrum Recorder presents a complete frequency and level analysis of noise and vibration. It is an example of the way Brush instrumentation can aid *your* analysis of noise, vibration or strain.

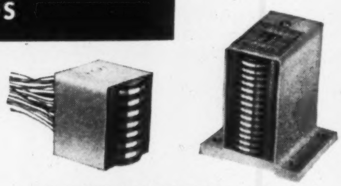
- All sounds from 14 cycles to 36,000 cycles per second automatically scanned and recorded by the Brush Spectrum Recorder to eliminate laborious plotting of data.
- Measurements made in one-third otave steps, to positively identify frequencies.
- Complete recording through the complete frequency range made in 21 seconds, to save valuable engineering time.

The Spectrum Recorder is one unit in the most complete line of noise and vibration instrumentation available (manufactured in Denmark by Bruel & Kjaer). (See box opposite page). Thus Brush can offer you matched systems, and offer application assistance on complete projects.

MAGNETIC HEADS

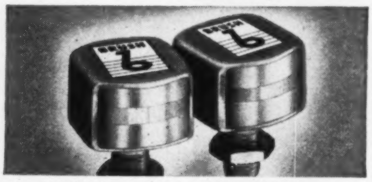
Brush offers single channel record-reproduce and erase heads, multichannel record-reproduce heads, miniature record-reproduce heads and erase heads.

Multichannel heads available in standard designs in encased assembly or cartridge assembly up to 26 channels. New high precision models offer extremely close tolerances.



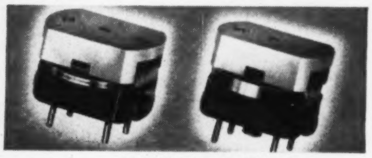
MULTICHANNEL HEAD DESIGN FEATURES

- All gaps in precise alignment.
- Individual channels are closely held in precisely machined metal brackets or cast into one integral block of specially selected synthetic resin.
- Complete assembly is non-microphonic and impervious to moisture.
- Mu-metal shields between individual channels.
- Ground lead supplied for shields and pole pieces.
- Wide range temperature operation.
- Special design features may be supplied to meet your requirements.



SINGLE-CHANNEL REDHEADS

Halftrack	Fulltrack
BK-1090 Record/Reproduce	**BK-1250** Record
BK-1091 High Impedance	**BK-1251** Reproduce
BK-1110 Erase	**BK-1252** Erase



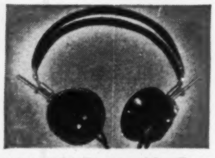
CARTRIDGE TYPES

The BK-900 series heads were designed for single-channel recording on any magnetic medium.

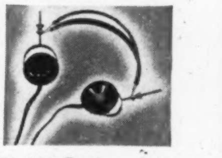
HEADPHONES

Brush crystal headphones have Bimorph® crystal drive element of high impedance, offer wide range response with uniform output, are lightweight, rugged, shockproof. Brush also offers a complete line of cartridges for acoustic applications.

Model BA-200 Ext. range headphones	**Model BA-200** Gen. purpose headphones
Model BA-206 High fidelity headphones	**Model BA-201** Single phone



Model BA-200. Designed for GENERAL PURPOSE applications including laboratory, studio and skilled amateur home use. High impedance; ideal for multiple installations.



Model BA-206. Designed for use where high fidelity and smooth frequency response are of paramount importance. Features exceptionally flat frequency response.

PIEZO-ELECTRIC ELEMENTS

for electro-acoustical and electro-mechanical applications: Plates of Rochelle Salt; Ammonium Dihydrogen Phosphate (ADP); Lithium Sulphate; Barium Titanate (Brush Ceramics A & B); Dipotassium Tartrate (DKT); Cylinders, curved plates, bowls and other shapes of Barium Titanate (Brush Ceramics A & B); Bimorphs* of Rochelle Salt; Ammonium Dihydrogen Phosphate (ADP); Barium Titanate.

ELECTRO-OPTIC ELEMENTS — Unpolished blanks of Ammonium Dihydrogen Phosphate (ADP); Potassium Di-Hydrogen Phosphate (KDP) for electro-optic shutters, etc.

For complete information write Dept. KK

BRUSH ELECTRONICS COMPANY

3405 Perkins Avenue, Cleveland 14, Ohio

BRUSH ELECTRONICS

DIVISION OF

CLEVITE CORPORATION

For more information circle 23 on inquiry card.

BRUSH ELECTRONICS

RECORDING SYSTEMS

provide full range instrumentation

Here are *complete* recording systems—designed to give you the greatest flexibility in measurement problems. For example:

- A greater range of signals can be recorded with optimum resolution than with any other direct writing Oscillograph. New Brush Oscillographs have the widest chart speed range available—from 10″ per day to 10″ per second.
- The units are designed for physical interchangeability. The 4 and 6-channel Oscillographs are mounted in identical chassis. Systems can be mounted in standard 19-inch racks, or bench top or floor consoles.
- Coordinated *system* design means that one system can meet many requirements. You can cover the full range of direct writing Oscillograph application with Brush equipment.
- Accessories available: event markers, timing markers and remote control units.

WHAT IS YOUR MEASUREMENT PROBLEM?

These Brush instruments can simplify your testing and development work.

FOR ELECTRICAL MEASUREMENTS

Amplifiers for systems to measure and record voltages and currents.

BL-530	Dual Channel D. C. Amplifier
BL-550	D. C. Amplifier, High Gain
BL-560	Servo-Analyzer
BL-905	A. C. Amplifier, High Gain
BL-954	A. C. Pre-Amplifier, High Gain
BL-533	Single Channel D. C. Amplifier
BL-536	Multichannel D. C. Amplifier
BL-266D	Fault Recorder
BL-288	Event Recorder

FOR PHYSICAL MEASUREMENTS

Amplifiers for measuring stress, strain, torque, force, pressure, etc.

BL-520	Universal* Amplifier
BL-350	Input Box (Resistive)
BL-345	Input Box (Inductive) Tension Analyzer*

DIRECT WRITING OSCILLOGRAPHS

Portables

BL-201	Singe Channel Direct Inking
BL-202	Double Channel Direct Inking
BL-221	Single Channel Direct Inking and Electric
BL-222	Double Channel Direct Inking and Electric
BL-274	Four Channel Direct Inking and Electric
BL-276	Six Channel Direct Inking and Electric

Rack Mounting

BL-261	Single Channel Direct Inking and Electric
BL-262	Double Channel Direct Inking and Electric
BL-254	Four Channel Direct Inking
BL-256	Six Channel Direct Inking
BL-264	Four Channel Direct Inking and Electric
BL-266	Six Channel Direct Inking and Electric
BL-268	Eight Channel Direct Inking and Electric

FOR RESISTANCE-WELDING MEASUREMENTS

For measuring and recording welding variables.

BL-325	Welding Analyzer*

FOR SOUND MEASUREMENTS

BL-1516	Strain Gage Apparatus
BL-1015	Low Frequency Beat Frequency Oscillator
BL-1602	Frequency Distortion Measuring Bridge
BL-1609	1/3 Octave Filter Set
BL-1014	Beat Frequency Oscillator
BL-1606	Vibration Pickup Preamplifier
BL-2002	Heterodyne Voltmeter
BL-2105	Frequency Analyzer
BL-2109	Third Octave Spectrum Analyzer
BL-2304	High Speed Level Recorder
BL-2370	Polar Diagram Recorder
BL-2601	Microphone Amplifier
BL-3302	Frequency Response Recorder
BL-4002	Sound Absorption Measuring Equipment
BL-4109	Artificial Ear
BL-4111	Condenser Microphone
BL-4119	Microphone Calibration Apparatus
BL-4211	Constant Sound Pressure Source
BL-4210	Artificial Voice
BL-4308-4309	Miniature Accelerometer
BL-4707	Automatic Frequency Response Tracer

INDUSTRIAL INSPECTION EQUIPMENT

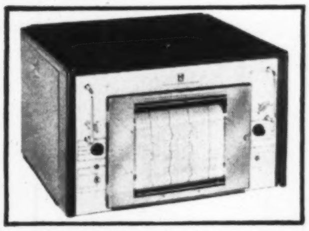
BL-110	Surfindicator*
BL-144	Metal Monitor

PRODUCTION INSPECTION EQUIPMENT

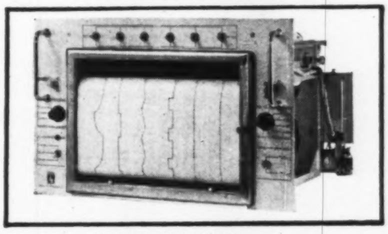
BL-1504, BL-1506	Deviation Test Bridge
BL-2423	Megohmmeter and D.C. Tube Voltmeter

(*Trade-Mark)

OSCILLOGRAPHS



Model BL-254, Four-Channel.



Model BL-266, Six-Channel.

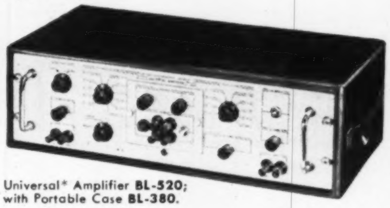
Oscillographs for standard rack or bench top console. The 4-channel unit can be expanded to six channels to meet your changing requirements. Electrically controlled chart drive transmission—standard in all multi-channel oscillographs—permits instantaneous switching and remote control. Choice of 8 or 16 chart speeds. Choice of ink or electric.

Model BL-274, Portable Four-Channel

Portable Oscillographs feature light weight and small size; they are self-contained. Equipped with electrically controlled chart drive transmission — 16 chart speeds available.

AMPLIFIERS

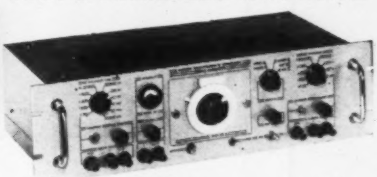
Model BL-530, Rack Mounting



Universal* Amplifier **BL-520;** with Portable Case **BL-380.**

Brush Amplifiers feature low drift scale expansion, choice of single ended or balanced inputs. May be operated on a wide range of line voltages and frequencies. New Universal* Amplifier can be used with *both* resistive or inductive transducers. When used with Brush Direct Writing Oscillograph, permits measurement and direct recording of physical phenomena such as strain, stress, torque, force, etc. Amplifier includes direct coupled section that may be used separately for voltage and current measurements.

SERVO-ANALYZER AMPLIFIER



New amplifier, coupled to a Brush direct writing oscillograph, provides a package unit to record performance of servo systems in carrier frequency range of 50 to 10,000 cps. Offers exceptional frequency response, flexibility, high accuracy.

BRUSH ELECTRONICS COMPANY

3405 Perkins Avenue, Cleveland 14, Ohio

BRUSH
ELECTRONICS

DIVISION OF

CLEVITE
CORPORATION

For more information circle **23** on inquiry card.

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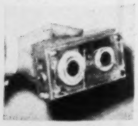
ALFAX PAPER AND ALDEN ADJUSTERLESS RECORDING TECHNIQUES MAKE POSSIBLE—

• *New Accuracies and Resolution in Direct Graphic Recording!*

Record full range of your electronic signal outputs—monitor processes and operations directly and instantaneously on Alfax Paper —no pens or ink—up to 17 step permanent tone shades.



Magazine Fact Finder—2 Channels Plus Timing

Here is a compact Magazine Recorder which will permanently record two separate operations and automatically print a recurring time signal on the Alfax Tape. Simple to install—they will operate unattended — remotely or on the spot.

Multi-Channel Fact Finder—30 Channels Plus Timing

Record thirty channels of on-off data by merely supplying current to writing styli—no pens or inks—simple motion switches are easily installed to make or break writing current to Alfax Paper. Ideal for monitoring production operations and processes, this compact, rugged recorder is portable for lab, factory and field use.

Alden "Flying Spot" Component Recorders

Get hi-resolution tone shade recordings on Alfax Paper of detecting instruments using scanning or sweep methods to collect data. Synchronize Alden "Flying Spot" with sweep or rep rate of your equipment—use direct signal outputs to mark Alfax with tone shades proportional to signal variations. Ideal for sonar, radar, facsimile, ultrasonic and magnetic flaw detection etc.

Alden Curve Plotters

The Basic Helix Recorder with special electronics can provide continuous, automatic curve plotting of phenomena converted to voltage. Any number of channels can be recorded simultaneously along with standard or reference signals so that the information is instantly and permanently self-calibrated.

• *Fastest, Most Accurate Means of Communication!*

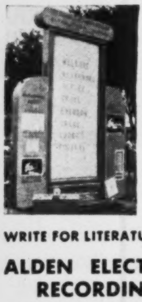
New high and low speed Alden facsimile recording systems using Alfax Paper are the most accurate means of communication today —are simple to install and operate virtually unattended.

High Speed Selective Dispatch Facsimile System

Specially designed to permit selection of pertinent data from any copy — letters, dispatches, reports, etc. — for instant transmission to wherever needed—yet complete reproductions can also be sent. 72 square inches of copy, 1800 words of newspaper type, or 900 words of typewriter text can be transmitted and received per minute.

Continuous Reproduction Facsimile System

Extremely high quality reproduction of large copy: such as newspapers, weather maps, blueprints, finished advertising layout, drawings, photographs, etc., can be transmitted easily with this equipment. Copy is scanned flat and reproduction automatically on remote continuous recorder.



Alden Giant Bulletin System

Fastest, accurate means of disseminating information to large groups of people. Automatically provides changing "up to the minute" bulletins 4 feet wide and up to 10 feet high and as much as 12 square feet of copy per minute, enlarged 10 times from remote flat-copy scanner as sent either by wire or a microwave system.

WRITE FOR LITERATURE on Alfax or Alden Recorders to:

ALDEN ELECTRONIC AND IMPULSE RECORDING EQUIPMENT CO.
Alden Research Center Westboro 6, Mass.

For more information circle **21** on inquiry card.

The man who KNOWS— Knows where to LOOK—

And a more complete personal or company library assures easy accessibility to reference sources which can enhance your knowledge. Each of the books listed below is a "must" for the instrumentation library.

100 Electronic Circuits

by M. H. Aronson and C. F. Kezer . . . . covers amplifiers, oscillators, pulse circuits, phototube circuits, phase shifters, etc. Complete with all circuit component values and response specifications.

paper, 180 pages, illustrated ..Price $2.00

The Automatic Factory

by June, Bardis, Lurio, Polaner, Sagedahl, Sklenar and Yenken. Here is THE book for all who want FACTS rather than wild opinions . . . a fresh viewpoint on what "manless factories" CAN be — a book free from the generalities, platitudes, exaggerations and misconceptions repeated by many writers on this subject. 1955.

cloth, 88 pages, illustrated ....Price $1.50

Process Control

by A. J. Young, Head of the Central Instrument Laboratory, Imperial Chemical Industries, Ltd.

". . . a MUST for all men who have to do with the automatic control of industrial processes; combines the practical "how" and the theoretical "why." 1955.

cloth, 134 pages, illustrated ..Price $2.00

Heat Inertia Problems of Automatic Control of Temperature

by Victor Broida, based on the concept of "fictitious mass" of heating process unit under automatic control. 1950.

paper, 5¼" x 8¼", 61 pages Price $1.00

Applications of Industrial pH Controls

by Allen L. Chaplin, 1950.

cloth, 4½" x 8", 144 pages ..Price $2.00

Operation and Care of Circular-Scale Instruments

by James Spencer, profusely illustrated with circuit diagrams, schematic diagrams, and photographs. 1949.

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Process Control Analysis

by Millard H. LaJoy and E. Allen Baillif." . . . an essential first step in analysis of closed-loop controlled processes via frequency response of the system." 1956.

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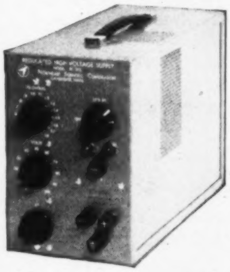
Instruments Publishing Co.
845 Ridge Ave.
Pittsburgh 12, Pa.

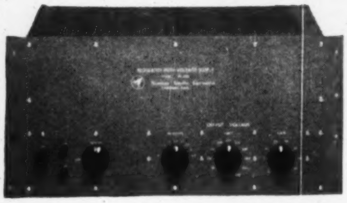
PRECISION SUPPLIES

Portable Pattern



Model	Voltage	Current
RE-1601	200-1600	0-25 Ma
RE-1602	300-1600	0-10 Ma
RE-1901	300-1900	0-25 Ma

Rack Pattern



Model	Voltage	Current
RE-1603	300-1600	0-10 Ma
RE-1610	300-1600	0-100 Ma
RE-2003	500-2000	0-25 Ma
RE-2006	500-2000	0-50 Ma
RE-3002	500-3000	0-20 Ma
RE-3004	500-3000	0-40 Ma
RE-3006	500-3000	0-60 Ma
RE-5001	500-5000	0-10 Ma
RE-5002	500-5000	0-20 Ma
RE-5003	500-5000	0-30 Ma
RE-5502	1000-5500	0-25 Ma
RE-10001	1000-10000	0-10 Ma

Features

Either positive or negative of any supply may be grounded.
Regulation: .01 to .001%
Line Stability: .05 to .005%
Long-term Stability: .01-.05% per hour, about 0.1% per day
Impedance: 1 to 5 Ohms
Ripple: 0.5 to 3 Mv P-P
Standard tubes used

Constant Current Supplies

RI-222E	.01-220 Ma	0-340V

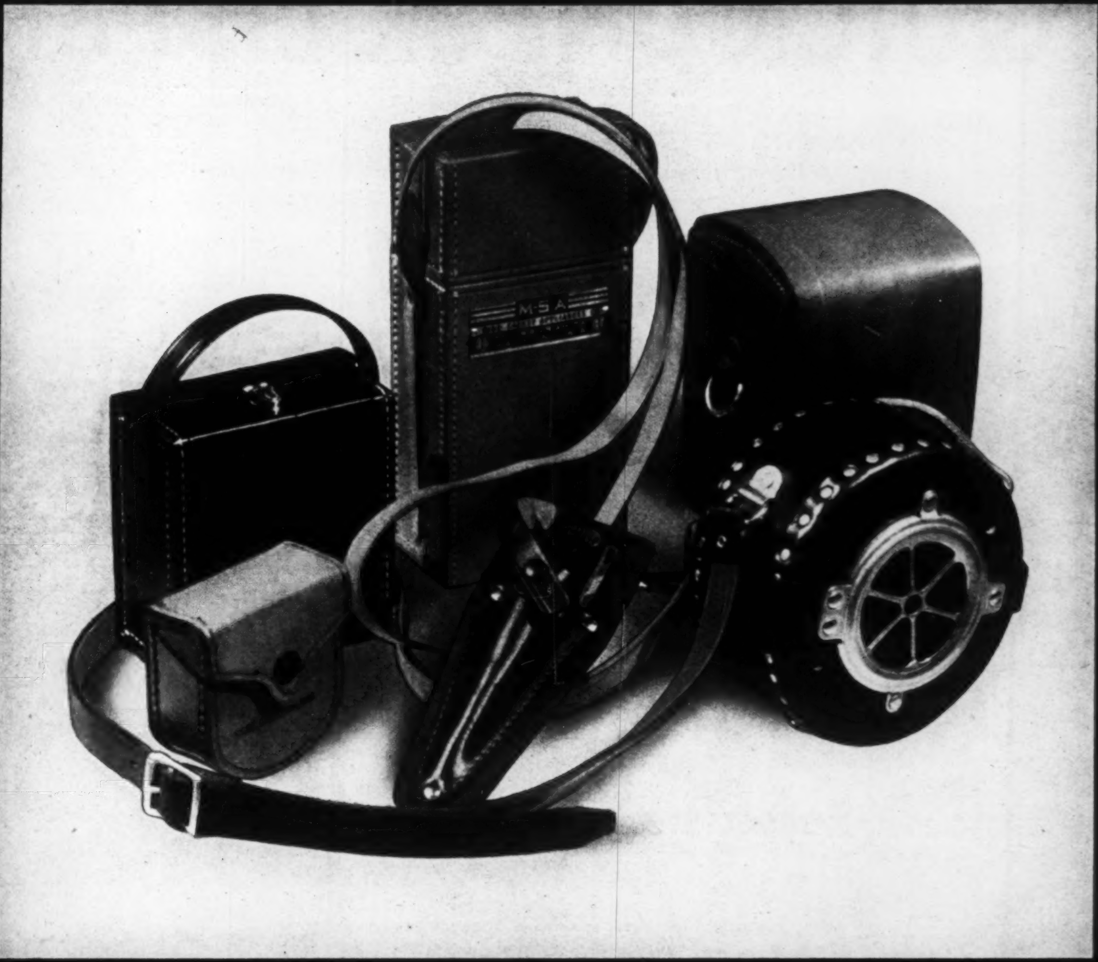
Millimeter Wave Generators

KSG-291	36.2-33.5 kmc	8.3-8.9 mm
KSG-290	33.5-29.7 kmc	8.9-10. mm
KSG-289	30-27.3 kmc	10.-11. mm
KSG-33	25-22 kmc	12.-13.6 mm

Any of these supplies can be modified or special designs built to meet specialized requirements.

Northeast Scientific Corp.
617 CONCORD AVENUE
CAMBRIDGE 38, Mass.

For more information circle **24** on inquiry card.



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G & K style-tanned case leathers are both decorative and protective. These luxurious leathers add merchandising appeal to your products and protect delicate instruments against damage.

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Company INC.
WORCESTER, MASSACHUSETTS

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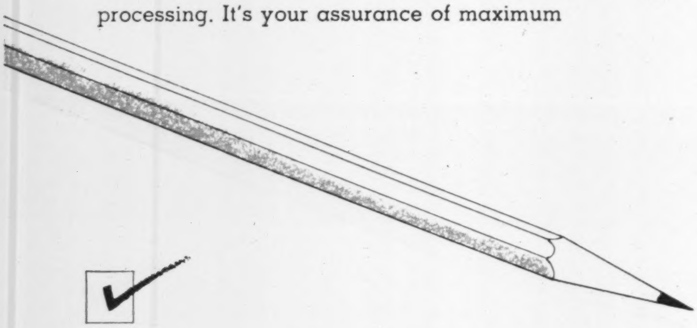
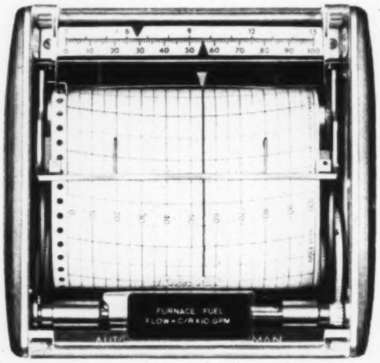
QUICK CHECK LIST of

If your operation can benefit from more accurate measurement or control of any of the process variables listed below, Foxboro Instrumentation offers the most advanced equipment to supply it. This complete line of individual instruments and fully integrated systems is the product of years of engineering experience in every phase of industrial processing. It's your assurance of maximum performance and freedom from maintenance. Complete details on any instrument or system shown here will be sent promptly on request. In addition, Foxboro Field Engineers will gladly assist you in solving individual control problems. For complete details, write **The Foxboro Company, 4613 Neponset Ave., Foxboro, Mass.**





Indicators · Recorders · Controllers

air weight
btu
capacitance
compression
concentration, solution
conductivity, solution
consistency
current — a-c, d-c
density
dew point
displacement
drag
flow
force
gas analysis
humidity
liquid analysis
liquid level
load
moisture content
motion
motor load
operation, schedule
operation, time
oxidation-reduction potential
pH
position
power, electric
pressure
resistance, electric
sheet moisture
sheet weight
specific gravity
speed
strain
stress
temperature
tension
thrust
torque
vacuum
viscosity
voltage
weight

Controller Actions (Pneumatic or Electric)

On-Off
Proportional
Proportional with Derivative
Proportional with Reset ("Stabilog")
Proportional with Reset and Derivative ("Hyper-Reset")
2- and 3-position
Multi-Position

FOXBORO
REG. U.S. PAT. OFF.

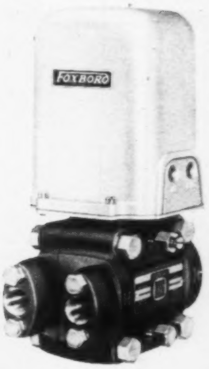
For more information circle **26** on inquiry card.

FOXBORO Instruments

☑

Special-Purpose Controller Types

Auto-selector
Averaging
Dual
Duplex
Limit
Multi-Zone
Ratio
Relation
Sequence
Time Schedule
(cam and camless types)
Triple



☑

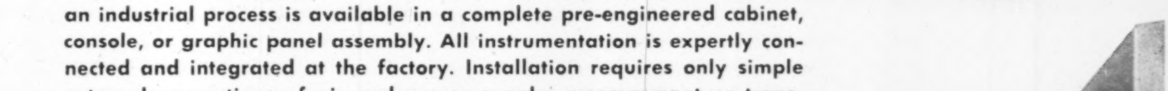
Transmission Systems

Pneumatic
Electric
Telemetering

☑

Cabinet and Panel Assemblies

Any combination of Foxboro Instruments required for precise control of an industrial process is available in a complete pre-engineered cabinet, console, or graphic panel assembly. All instrumentation is expertly connected and integrated at the factory. Installation requires only simple external connections of air and power supply, measurement or transmission lines.



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YOUR HEADQUARTERS

FOR HELP IN ACHIEVING DEPENDABLE, ECONOMICAL INSTRUMENTATION

Properly applied precision instrumentation contributes substantially to better quality control, greater operational efficiency and lower costs. Manning, Maxwell & Moore instruments assure all three – and more. They are available in wide variety to measure, indicate, record and control variables . . . to transmit operational information . . . and to protect personnel and equipment.

Whatever your application, we welcome the opportunity to help you find the best answers to your instrumentation problems. For Manning, Maxwell & Moore, Inc. is an industrial company that serves all industry. Catalogued information on specific products is available on request. Please address your inquiry to Stratford, Connecticut.

Our **INDUSTRIAL CONTROLS DIVISION** *manufactures 'American-Microsen' Electronic Instruments for measurement, transmission and control of process variables. All are precision devices built to the highest specifications of durability. All incorporate design and engineering characteristics that assure maximum performance and freedom from costly maintenance regardless of the requirements of the most demanding applications.*

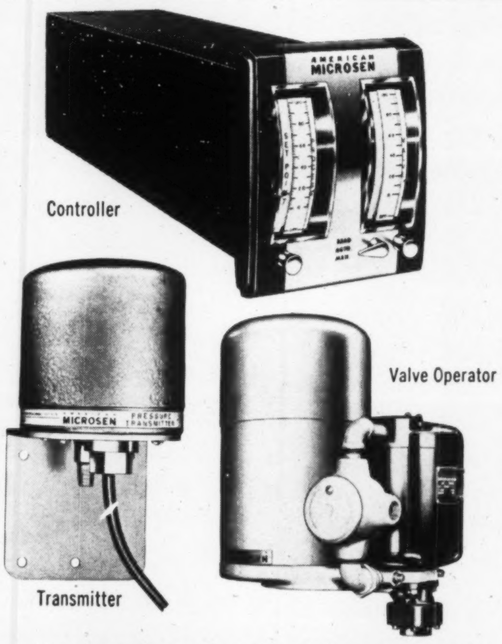
'AMERICAN-MICROSEN' TRANSISTORIZED ELECTRONIC PROCESS CONTROL SYSTEM. Designed to measure, indicate, record and control pressure, differential pressure, temperature, liquid level, flow, pH, oxygen concentration, gas analysis, etc. Basic units in the complete system are: **1) Transmitter** that accurately measures the variable and transmits the information to the controller on the panel board; **2) Controller** that handles *all* control functions — indicating or recording the process variable, controlling, and manual-automatic operation; **3) Electro-Hydraulic Control Valve Operator** — a power unit with position feedback to operate slip-stem valves, dampers, etc. (The 'American-Microsen' Electro-Pneumatic Valve Positioner is also available, if required.)

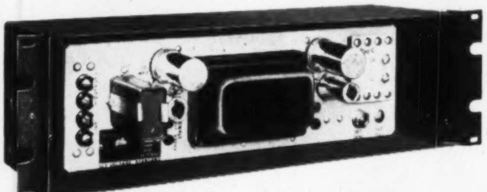
Transistors and printed circuitry are used to save space and to improve reliability and service life. The system attains such high reliability, lag-free transmission, sensitivity and accuracy that an entirely new concept of these control factors is created. The effects of distance in transmission are completely eliminated: the use of the famous "Microsen" balance assures a stable dc signal. No compressed air is required.

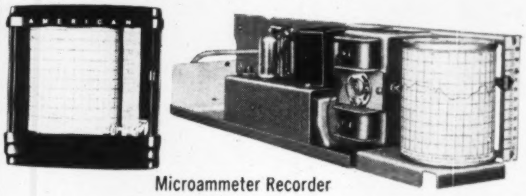
The 'American-Microsen' Process Control System can be integrated with electric digital print-out equipment to provide automatic logging or multipoint-potentiometer type recording.

'AMERICAN-MICROSEN' TRANSMITTING POTENTIOMETER. An extremely sensitive instrument. Makes it possible to measure and control accurately thermocouple temperatures or the signals from pH amplifiers, gas analyzers, resistance thermometer elements and other electrical systems. Provides continuous highest accuracy without drift. Responds to input change of 3 microvolts or less. Response speed: 0.04 second time-constant for 1000° F. span. No slide wires or choppers—trouble-free operation. The signal output transmittable 30 miles or more, over a simple two-wire circuit. In addition to application with 'American-Microsen' receivers, the signal will operate standard dc milliammeters and recorders.

'AMERICAN-MICROSEN' MICROAMMETER MILLIVOLTMETER RECORDER. Accurately measures low-level dc signals with calibration accuracy within 0.5%, and sensitivity within 0.2% of span. Records on 3″ continuous strip chart or IBM-type card chart, with linear coordinates. Speed: up to 0.05 seconds for 63% of full scale changes. Positions recording pen with force thousands of times greater than the usual direct deflection electrical movements. "Microsen" balance compensates for ambient conditions, changes in power supply and components. Span and zero adjustments assure easy calibration and zero suppression *in the field*, without special equipment. Power is ample to operate alarm contacts.




Transmitting Potentiometer



Microammeter Recorder

'American-Microsen' Precision Electronic Relays are available for alarm signalling and on-off operation of electrical loads, for actuation by 'American-Microsen' transmission or control system signals.

For more information circle **27** on inquiry card.

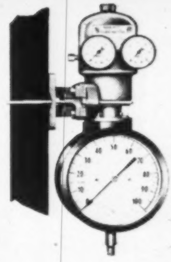
WHERE the products of MANNING, MAXWELL & MOORE, INC. are manufactured

INDUSTRIAL CONTROLS DIVISION: **'American-Microsen' Industrial Electronic Instruments, *Stratford, Conn.***
CONSOLIDATED ASHCROFT HANCOCK DIVISION: **'American' Industrial Instruments, 'Ashcroft' Gauges, 'Consolidated' Safety and Relief Valves, *Stratford, Conn.* 'Hancock' Valves, *Watertown, Mass.* 'Consolidated' Safety Relief Valves, *Tulsa, Okla.***
AIRCRAFT PRODUCTS DIVISION: **Aircraft and General Application Products for Pressure and Temperature Measurement and Control, *Danbury & Stratford, Conn. and Inglewood, Calif.***

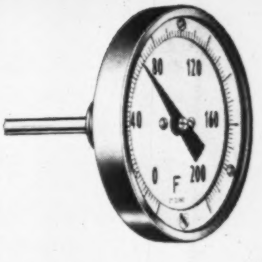
Manning, Maxwell & Moore of Canada, Ltd., Galt, Ontario, manufactures 'Ashcroft' Gauges, 'Consolidated' Safety and Relief Valves and 'Hancock' Valves. Abroad, well-known companies in England, France, Belgium, Western Germany and Italy are licensed to manufacture many of our products. We will gladly supply their names upon request.

Our **CONSOLIDATED ASHCROFT HANCOCK DIVISION** *produces a great variety of precision pressure gauges, industrial thermometers, temperature regulators and valves for every industry. All are skillfully manufactured products long recognized throughout the world for technical excellence, complete reliability, economy and long life under the most adverse conditions of use.*

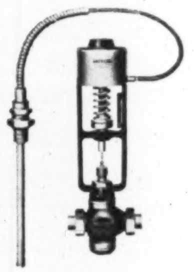
'Ashcroft' Pressure Gauges. Accurately indicate or record pressure of steam, air, water, oil, gas and other media – 30" vacuum or a few ounces up to 100,000 psi. Eight Bourdon tube materials available. Cases made of Alumalife®, cast iron and phenol meet the widest range of services. Numerous dial sizes. Choice of all-stainless-steel movement or stainless-steel movement with nylon bearings and pinion gear.



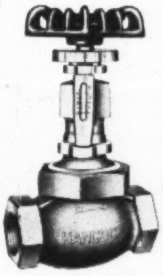
'Ashcroft' Pneumatic Pressure Transmitters. Combine speed with maximum protection and serviceability. Supply air pressure as low as 18-20 psi for 3 to 15 psi output provides especially advantageous operation where electrical wiring might be a hazard. Safely measure pressures up to 100,000 psi. Available with pressure sensing elements in all standard pressure ranges and Bourdon tube materials.



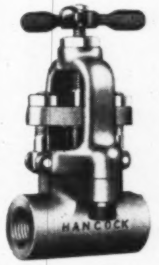
'American' Thermometers. Industrial glass, dial, and recording types. Mercury, vapor pressure, gas or bi-metal actuation. All types are accurate, easy to read, ruggedly built. *Temperature ranges:* minus 100° F. to plus 3000° F. depending upon type. Mercury-actuated instruments with "Magic Pulse" self-compensating capillary tubing permit reading temperatures far from their source.



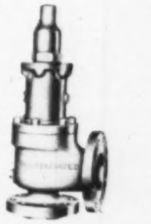
'American' Temperature Regulators. Self-operated, precision type. Eliminate costly, erratic manual control. Provide positive temperature control of oil, water, steam and other media in heating or cooling processes. No electricity or compressed air needed. Save fuel and manpower, assure greater product uniformity. Temperature adjustment and repeat setting are easy. *Sizes:* ¼" to 4".



'Hancock' "Flocontrol" Valves. For manual control of flow, temperatures, pressure. 3-in-1 design provides index, proportional flow and shut-off. Micrometer dial and pointer permit settings within 1/100th turn of the handwheel. Any setting easily duplicated. Globe and angle types. *Bronze:* ¼" thru 2"–150# and 300# series. *Steel:* ¼" thru 4"–150#, 300# and 600# series flanges.

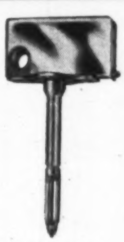


'Hancock' Instrument Valves. High pressure, stainless steel valves for use on instrument panels, on instrument, gauge, bypass and corrosive lines, and on orifice meters. Ideal for services where high temperatures are of short duration and occur infrequently. Compact–permit close alignment of piping with near structures. Globe and angle types. Stem and disc are of needle point design. *Service rating:* 6000# O.W.G. – 100° F. *Sizes:* ¼", ⅜" and ½".

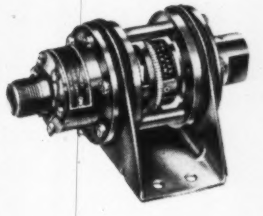


'Consolidated' Safety Relief Valves. Protect unfired pressure vessels – gas, vapor and liquid storage tanks, pipelines, pumps – against overpressures. Safeguard personnel, plant and equipment. Valve action is consistently positive. '2 in 1' design permits the Standard type to be converted to Bellows type *in the field.* Can also be interchanged with safety relief valves of other makes. Have fewer functional parts than comparable valves – maintenance is easier, more economical.

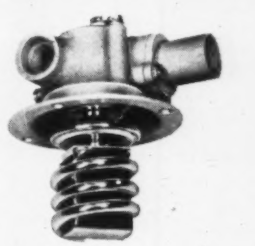
Our **AIRCRAFT PRODUCTS DIVISION** *manufactures many products for pressure and temperature measurement and control. These include electronic, pneumatic and hydraulic devices. Among them are aircraft fuel valves, pressure gauges and switches, temperature controls, servo and hydraulic valves. All are built to the highest specifications of precision and durability to assure superb performance under the severest conditions.*



"Vapoflash" High Temperature Measuring Probe. Mercury actuated. Size is comparable to that of a thermocouple. Operating range: 900° F. to 1500° F. High gain pneumatic output signal provides adequate power for gas turbine control actuation. Permits application of simplified mechanisms to modulate main engine and afterburner fuel flow and the exhaust area of turbojet engines. Several "Vapoflash" units, connected in parallel, simplify averaging, measurement and control of gas turbine temperatures.



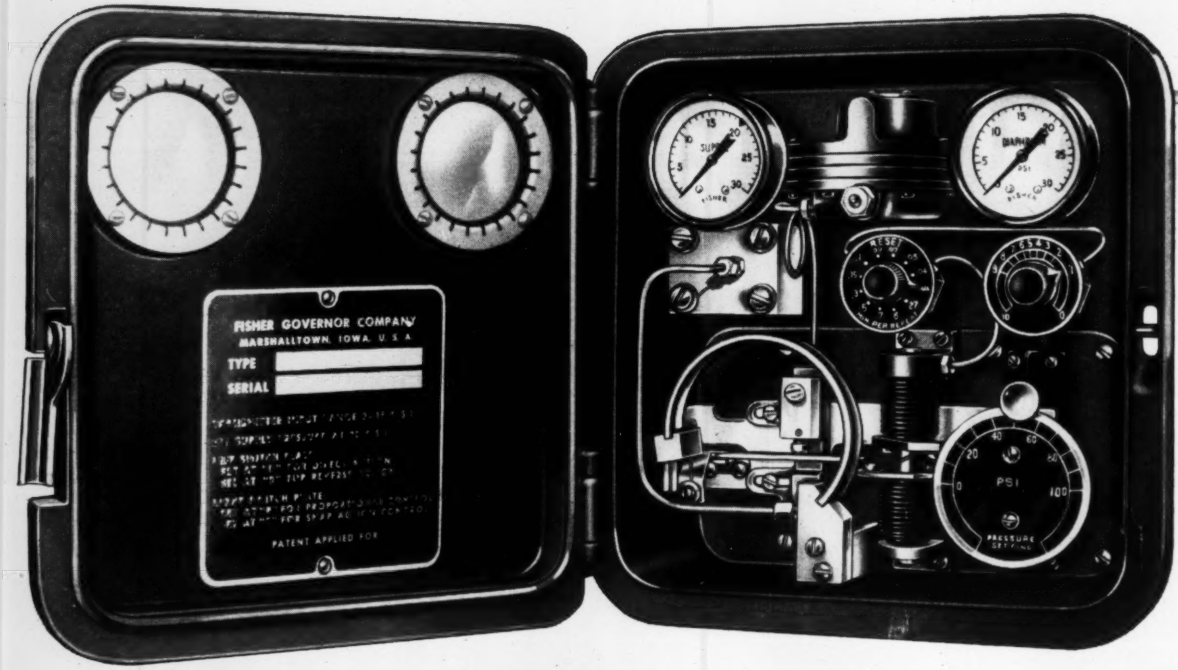
Pressure Actuated Switch Type 6885. For use in aircraft, rocket, and guided missiles to control electrical circuits. Accurate over wide temperature range. Immune to standard aircraft fuels and corrosive media. Operating range: 0-10, 10-50, and 50-100psi. Ambient temperature: minus 65° F. to plus 250° F. Vibration: up to 2000cps at 20g. *Size:* 4⅜" L. x 2-3/16" H. x 3⅝" D. *Weight:* 9 oz.



Ram Temperature Sensor-Transmitter Type 155F6. For jet engines designed for supersonic flight. Provides large motive power for resetting governors and other control members. Uses fuel, air or other medium to supply control pressure accurately proportioned to ram intake temperatures ranging from minus 100° F. to plus 650° F. Time response: 1.5 seconds for air flow at 35 lbs. sq. ft./sec.

MANNING, MAXWELL & MOORE, INC.

STRATFORD, CONNECTICUT


FISHER GOVERNOR COMPANY
MARSHALLTOWN, IOWA, U.S.A.
TYPE
SERIAL
PATENT APPLIED FOR
SUPPLY
DIAPHRAGM
PSI
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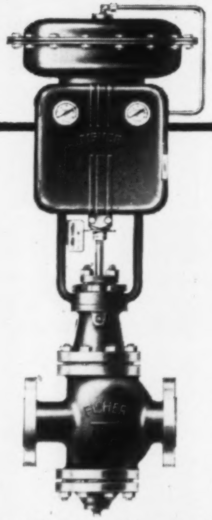
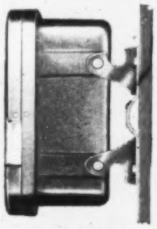
RESET
PSI
PRESSURE SETTING



Any of the Wizard controllers can be yoke mounted on a diaphragm control valve to make a compact pilot operated pressure regulator as shown above. All Wizards are normally supplied with an operating medium air set which filters and reduces supply pressure of 25 to 250 psi to constant pressure of 20 psi for 3 to 15 psi, or 35 psi for 6 to 30 psi operation.

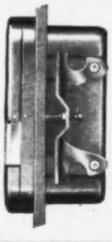
SURFACE MOUNTING

The Wizard can be mounted on the surface of a wall or any stable surface. A special mounting bracket is provided and any type of screw or bolt suitable for the mounting surface may be used.



FLUSH MOUNTING

By turning the bracket around that is provided for surface mounting, any Wizard can be mounted flush to a panel.



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WIZARD II

PRESSURE CONTROLLER

For over a quarter century, the name "Wizard" has become a byword as the pressure controller that is accurate, dependable and simple to operate in all types of industry.

Now, the WIZARD II takes over to meet the demands of modern, complex control systems requiring closer control. The WIZARD II retains all of the basic simplicity, accuracy and dependability of the Wizard 4100U, plus a number of new components. The WIZARD II is in a waterproof aluminum die-cast case and cover with 1/4″ tapped vent for gas service. With the addition of a few parts, the basic proportional controller can be converted to: (1) two-position action or "Snap Action", (2) pressure transmitter, (3) controller with remote set adjustment, (4) proportional plus reset response. The WIZARD II can be changed from direct to reverse action or vice versa without additional parts.

The superior subassembly construction stresses simplicity and compactness. Each subassembly is assembled and calibrated prior to mounting in the case. All Series 4150 Wizards can be supplied for remote set adjustment for changing the pressure setting from a location away from the Wizard controller.

Careful and exhaustive tests have conclusively proved that the WIZARD II measures up to the rigid Fisher standards.

A completely descriptive and illustrated bulletin on the WIZARD II is yours for the asking. Write today for Bulletin No. D-4150.

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Marshalltown, Iowa / Woodstock, Ontario

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Parker
Hydraulic and fluid
system components

TUBE AND HOSE FITTINGS DIVISION
The Parker Appliance Company
Section 421
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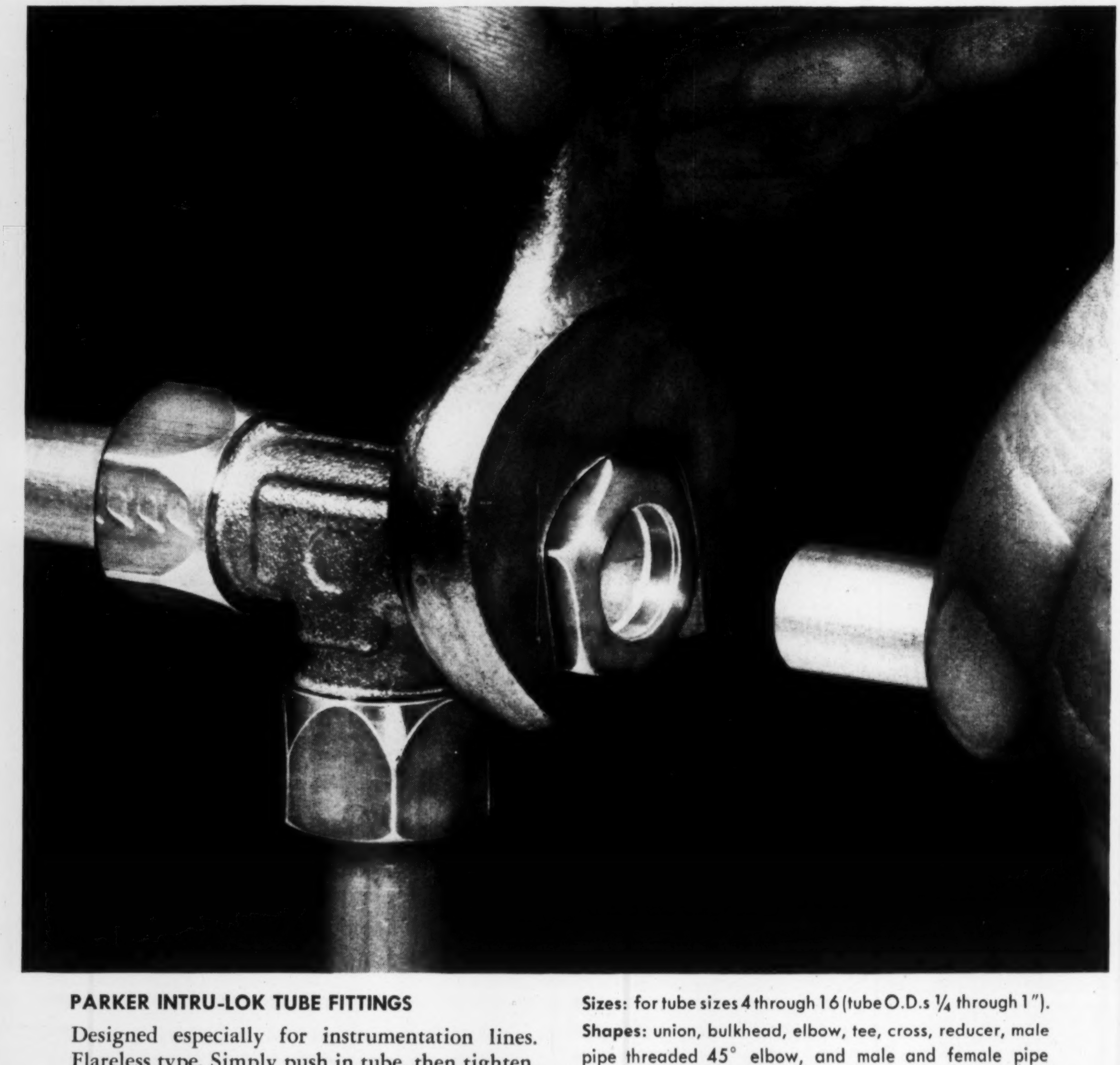
WHY PARKER COMPONENTS HELP ASSURE EFFECTIVE INSTRUMENTATION TUBING SYSTEMS



PARKER INTRU-LOK TUBE FITTINGS

Designed especially for instrumentation lines. Flareless type. Simply push in tube, then tighten. Installation is that simple. Available for copper, aluminum or plastic tubing. Tests prove its superiority in withstanding vibration. Underwriters' Laboratories approval for hazardous liquids.

Sizes: for tube sizes 4 through 16 (tube O.D.s ¼ through 1").

Shapes: union, bulkhead, elbow, tee, cross, reducer, male pipe threaded 45° elbow, and male and female pipe threaded connectors, elbows and tees.

Materials: brass, aluminum (available in other materials on special order).

Reference: Intru-lok Fittings Catalog 4324.

For more information circle **29** on inquiry card.

Parker
Hydraulic and fluid
system components

TUBE AND HOSE FITTINGS DIVISION

The Parker Appliance Company
Section 421
17325 Euclid Avenue • Cleveland 12, Ohio

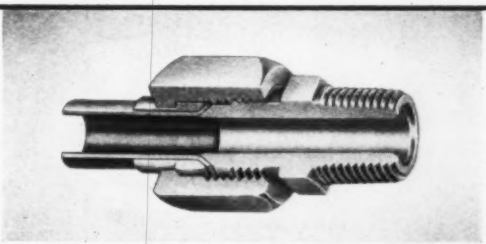
WELD-LOK TUBE FITTINGS, for extreme temperatures, corrosion conditions. Machined from high-quality bar stock and forgings. Tapered socket aligns and holds tube for welding operation. Correctly induced weld is unaffected by vibration, shock or thermal distortion.

Sizes: for tube sizes 4 through 16 (tube O.D.s ¼ through 1").

Shapes: Union elbow, 45° elbow, tee, cross, adapter, male pipe threaded connector, and female pipe threaded gage connectors.

Materials: steel, stainless steel.

Reference: Weld-lok Fittings Catalog 4370.



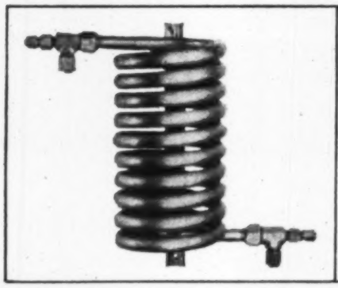
TRIPLE-LOK TUBE FITTINGS, flare type, for high-pressure, high-temperature, severe vibration service. May be reassembled repeatedly, always for leak-proof joint. Accommodates full range of standard tube wall thicknesses. ASME Code for pressure piping; Underwriters' Laboratories approval.

Sizes: for tube sizes 2 through 32 (tube O.D.s ⅛ through 2").

Shapes: unions, elbow, tee, cross, bulkheads, reducer, cap, plug, male pipe threaded 45° elbow and long elbows, and male and female pipe threaded connectors, elbows and tees.

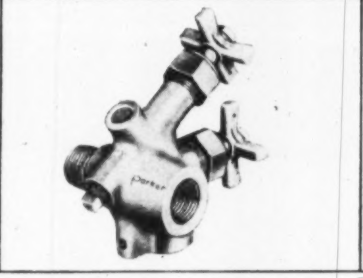
Materials: brass, steel, stainless steel, aluminum alloy.

Reference: Triple-lok Fittings Catalog.



DUAL HEAT TRANSFER COIL

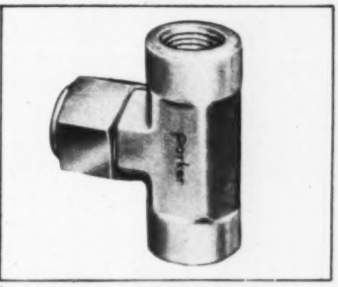
For cooling steam for water test samples on boilers of all ratings . . . Also for heat transfer on refrigeration equipment, oil stills, hydraulic circuits—Coil No. 3101-5 (copper): up to 1000 p.s.i., 700° F. Brass fittings. Coil No. 3101-6 (stainless steel inner coil) and Coil No. 3101-7 (Inconel inner coil) up to 2000 p.s.i., 1400°F. Outer coil copper. Coil terminal fittings steel. End fittings stainless steel. Coils for higher pressures and temperatures available on special order.



DRAFT GAGE MANIFOLD VALVE

Provides easy, efficient method for cleaning fly ash and combustion residue out of draft gage lines without disconnecting lines. Adaptable for multipointer gage installations.

Specifications: Brass. Compressed air side port — ½" MPT. Opposite side port — ½" FPT. Gage line connecting port (top) ⅛" FPT. Draft line connecting port (bottom) ⅜" FPT. Mounting hole — ¼"-20 tap (Class 2).



PRESSURE GAGE SNUBBER

Pressure gage snubber prevents damage from violent pressure changes. Snubbing chamber is mounted on side for easy adjustment without disturbing line connections. Three different size pins offer 13 gradations of damping adjustment.

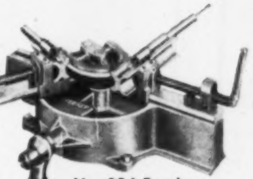
Specifications: Working pressure up to 5,000 p.s.i. Both connecting ports ¼" FPT. Body: high-strength forging. Pins: type 316 stainless steel.

Materials: brass, stainless steel.

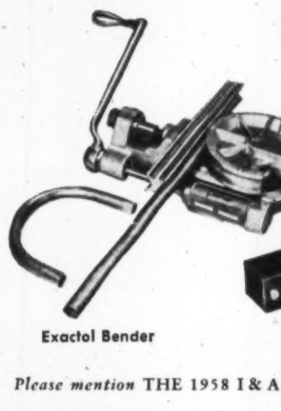
PARKER TUBE-WORKING TOOLS

Dependable equipment for fabrication of all metal tubing including stainless steel. Hand tube benders, cutters, flarers; bench-mounted benders; power flarer-beaders.

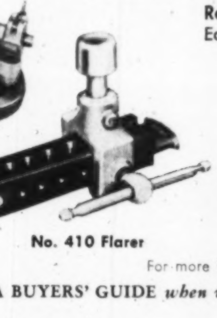
Reference: Tube Fabrication Equipment Catalog.



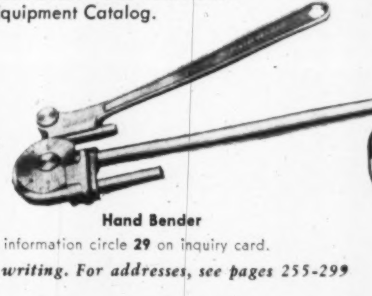
No. 824 Bender



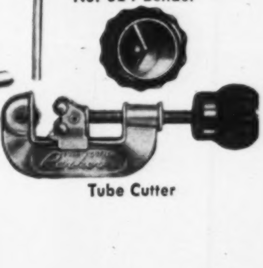
Exactol Bender



No. 410 Flarer



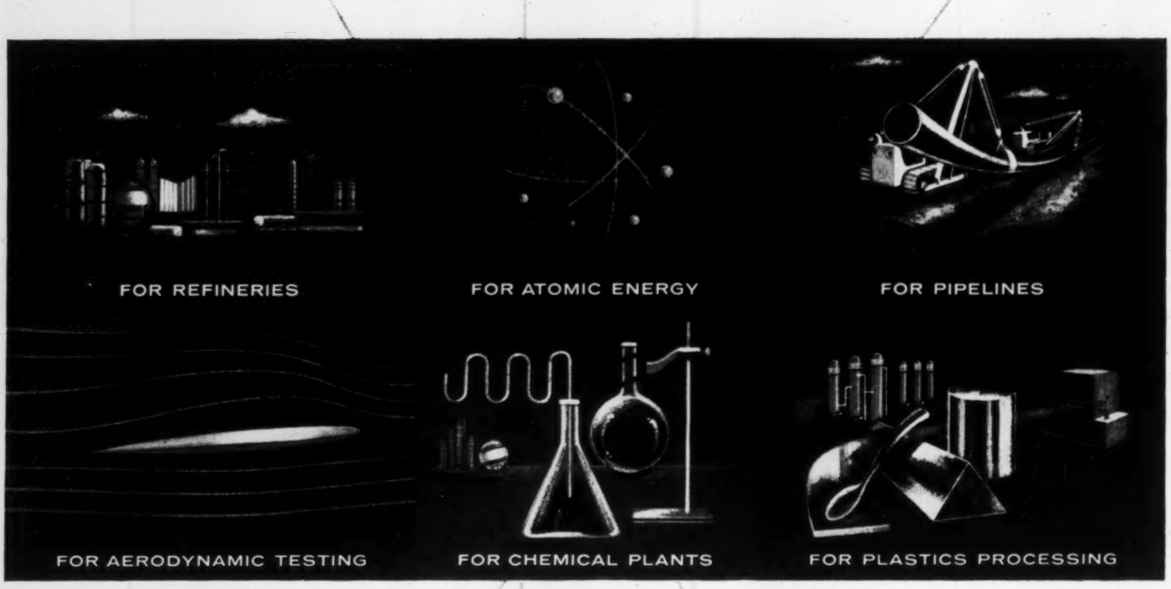
Hand Bender



Tube Cutter

For more information circle **29** on inquiry card.

GO AUTRONIC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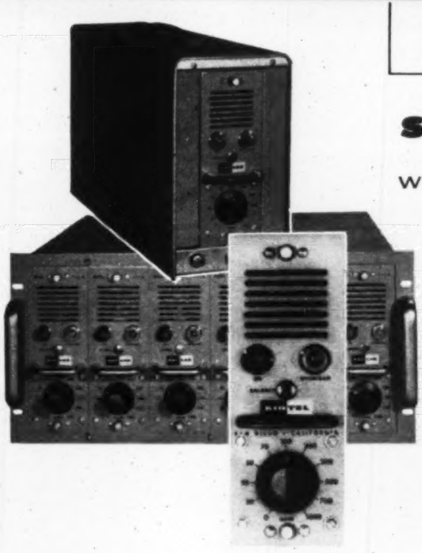
For more information circle **30** on inquiry card.

AMPLIFY DC MICROVOLT LEVEL WIDEBAND DC AMPLIFIERS

KIN TEL



STABILITY *locked in!*

WITH CHOPPER AMPLIFIERS

- ± 2 Microvolt Drift
- Extremely Low Noise
- High Input Impedance
- Low Output Impedance
- ± 35 Volt, ± 40ma Output
- 10 Accurate Gain Ranges
- 6 Unit Rack-Mounting
- Integral Power Supply

AMPLIFY MICROVOLTS WITH STABILITY

KIN TEL Model 111A amplifiers provide the lowest drift of any commercially available wideband DC amplifiers. They utilize KIN TEL's proven chopper amplifier circuitry to provide unsurpassed dynamic performance — unaffected by load or gain changes.

OPERATIONAL AMPLIFIER

The Model 111AO is an operational version of the Model 111A amplifier. In this unit, the "0" gain position is an open loop position, and the user may employ his own external networks to provide up to 100% resistive or capacitive feedback around the amplifier. By choosing the proper attenuator, input, and feedback components the user may obtain whatever amplifier characteristics are desired, such as limiting the gain or bandwidth, performing integrations, and generating complex linear transfer functions.

FLOATING INPUT AMPLIFIER

The Model 111AF is a floating input version of the Model 111A which permits its use with transducers, particularly thermocouples, which are grounded at the pickup location. The Model 111AF differs from the Model 111A only in that it eliminates the problem of ground loops resulting from grounding at both the amplifier and the pickup location.

APPLICATIONS

These amplifiers make dynamic, high-accuracy, low-level DC instrumentation systems practical. In comparison to AC systems, DC strain gage systems offer greater accuracy, wider bandwidth, operational simplicity, reduced maintenance, and eliminate capacitive balance problems. In one installation alone, KIN TEL DC amplifiers have logged over a million hours of accurate, trouble-free operation. The Model 111 series is ideally suited to telemetering, data reduction and all types of instrumentation facilities utilizing transducer measuring systems. They are excellent as scope preamplifiers, recorder and galvanometer driver amplifiers, or general purpose laboratory amplifiers.

SPECIFICATIONS

Gain (Phase Inverting)	0, 20, 30, 50, 70, 100, 200, 300, 500, 700, 1000
Gain Accuracy	±1%, DC to 2 KC; ±3%, DC to 10 KC; ±30%, DC to 40 KC
Input Impedance	100,000 ohms
Output Impedance	Less than 1 ohm in series with 25uh
Equivalent Input Drift	±2uv when used with regulated line voltage, ±10% change in AC input causes less than ±5uv change. 10 minute warm-up period required.
Equivalent Input Noise	0 to 3 cps, less than 5uv peak to peak. 0 to 750 cps, less than 5uv RMS. 0 to 50 kc; less than 12uv RMS.
Chopper Intermodulation	Less than 0.1%
Maximum Output Cable Capacity	0.02uf (external)
Linearity	Better than 0.1% to 2KC
DC Output Capability	0 to 35v where RL > 1000 ohms 0 to 40 ma where RL is 10 to 400 ohms
Frequency Response	0.3 db (±3%) DC to 10KC, less than 3 db down at 40KC
Rise Time	Less than 10 u sec.
Phase Shift	Less than 5° to 2KC
Overload Recovery Time	Less than 3 seconds
Dimensions:	
Amplifier Unit	2⅞" wide, 7⅝" high, 14⅝" deep
Unit in Cabinet	5 7/16" wide, 10" high, 18¼" deep
Rack Adapter Module for 6 Units	19" wide, 8¾" high, 18¼" deep (Width of cabinet behind 19" front panel is 17⅝")
Net Weight (Amplifier)	11 pounds
Price:	
111A Amplifier	$550.00*
111AO Amplifier	$560.00*
111AF Amplifier	$575.00*
111CF Cabinet for single 111A, AO, or AF Amplifier, with fan and connector	$105.00
111RF Rack Adaptor Module for six 111A, AO, or AF Amplifiers, with fans and connectors	$200.00

* Amplifier must be used with cabinet or rack adapter module.

Representatives in all major cities — Write today for literature or demonstration.

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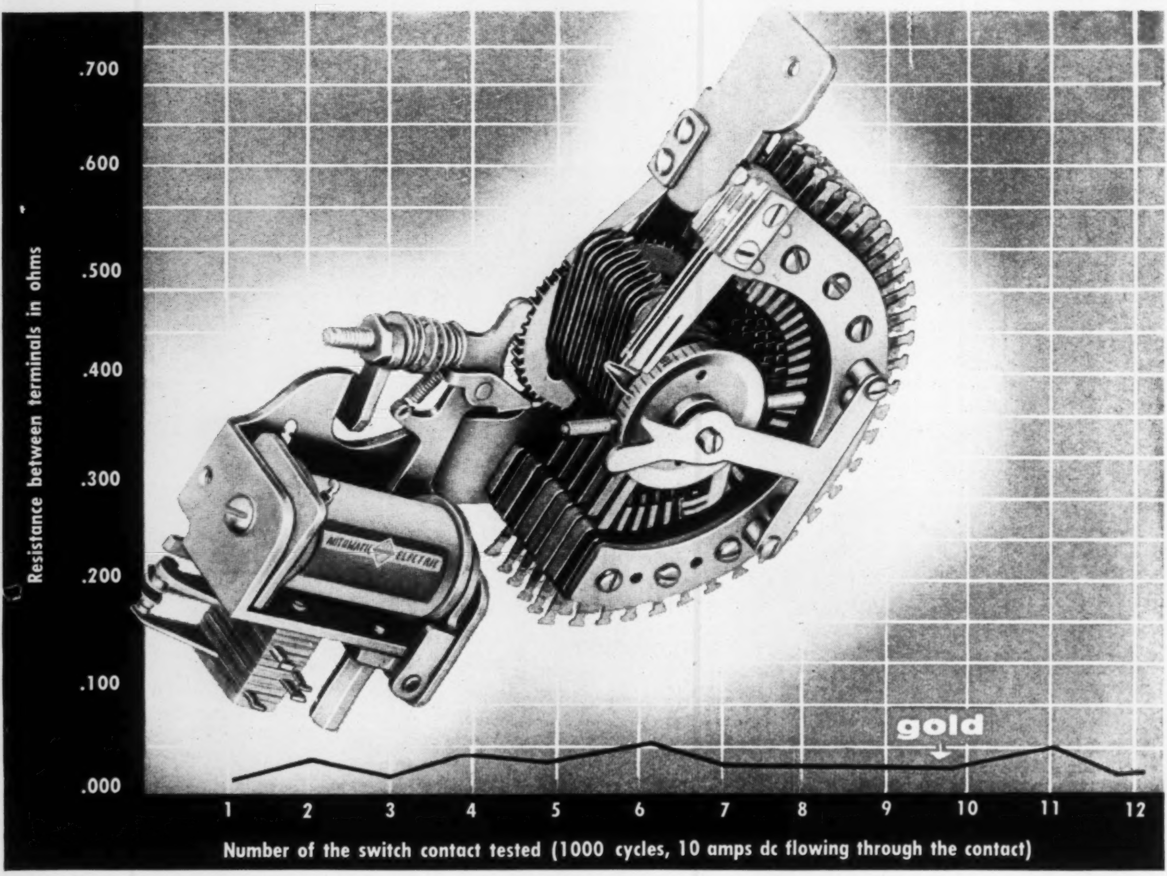
KIN TEL
[KAY LAB]

For more information circle 31 on inquiry card.

Why instrument men use Automatic's Switches with precious metal contacts



More and more instrument engineers are specifying gold-plated or silver-inlaid contacts for:

- *thermocouple monitoring*
- *strain-gauge readings*
- *infrequently operated devices such as submarine mine detonators*
- *low-power-level circuits, as in computors*
- *many other uses where extremely low resistance is essential*

Instrument men find that, in measurement, indication and supervisory functions, precious-metal contacting provides:

- accuracy at lowest potentials
- low, and relatively constant, contact resistance
- freedom from spurious potentials which can, under some conditions, be set up by base-metal contacts

Precious-metal contacting costs more, of course. But with Automatic Electric's custom designing, it is not as expensive as you might think; on either Type 44 or Type 45 switches, you can specify precious-metal contacts for instrument circuits only, with standard contacts handling the less important circuits.

For full information on the use of stepping switches—*with or without* precious-metal contacts, ask for Circulars 1641 and 1698. *Write:* Automatic Electric Sales Corporation, (FIllmore 5-7111) Northlake, Illinois. *In Canada:* Automatic Electric Sales (Canada) Ltd., Toronto. *Offices in principal cities.*

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GENERAL SYSTEM

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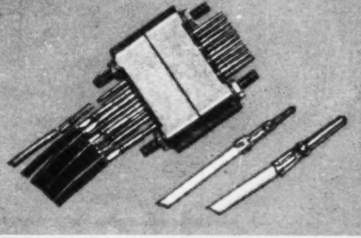


TAPER PINS

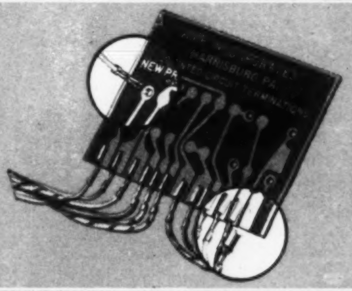
The A-MP Miniature Taper Pin Receptacle eliminates tedious and costly operations of soldering leads to miniature connectors. This solderless, quick-disconnect terminal is applied to the lead by means of A-MP Automachine and A-MP Certi-Crimp Tooling . . . then capped over other type connectors, modified to receive the A-MP 37 Series Miniature Taper Pin Receptacle.

Other A-MP Taper Pins are available (Series 53 and 88) for wire sizes 24 - 12 AWG and a wide range of insulation sizes. Insulation piercing Taper Pins are available for small stranded wires and popular size tinsel cords.

TAPER TAB RECEPTACLES

A-MP Taper Tab Receptacles are a recent development for flat tabs employing the taper key principle. They are available for wire sizes 24 - 18 AWG, in gold, silver and tin plated finishes.

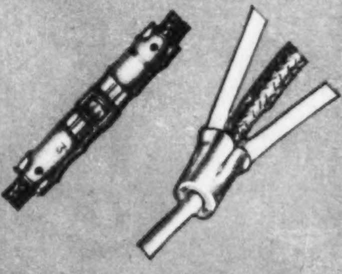
The tapered section of these receptacles is standardized to fit the same size tapered tab. Insulation piercing Taper Tab Receptacles are available for small wire sizes and tinsel cords.



CONNECTORS FOR PRINTED CIRCUITS

The AMP-Edge Connector is design-engineered with positive wiping contact and frictional grippage. This connector gives you: greater flexibility . . . its size does not limit the size of your completed unit; design versatility . . . easily applied, in any arrangement, to any section of the perimeter; costs reductions . . . in applying connector to the wire and to the printed circuit.

The AMPin Connector . . . gets leads to the printed circuit in one assembly operation . . . eliminates your investment in expensive automation equipment . . . no loose leads during the solder-dip process . . . construction promotes good capillary flow of solder during dipping process . . . can be applied to solid or stranded wires . . . is self-retaining and self-aligning.



THE SHIELDED WIRE TEAM

The A-MP Shielded Wire Splice joins sections of shielded wire so that the inner conductor and outer shield are firmly spliced and remain effectively insulated from each other. Features include: rectangular inspection window, in center, permits easy inspection to determine proper placement of ends of inner conductor; inspection ports, at each end, to check proper depth of braid enclosed after crimping; and overhang of outer sleeve projects beyond inner elements and grips braid for anti-vibration support.

The A-MP Termashield Shielded Wire Ferrule are of one-piece construction, is slightly thicker than the wires joined, and is the ideal one-step splice for ground tap accommodation.

This A-MP Shielded Wire Team is color-coded for easy identification of leads and connectors and provides a simple one-step operation that reduces assembly time and costs.

Further information on these products is available on request.

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AMP

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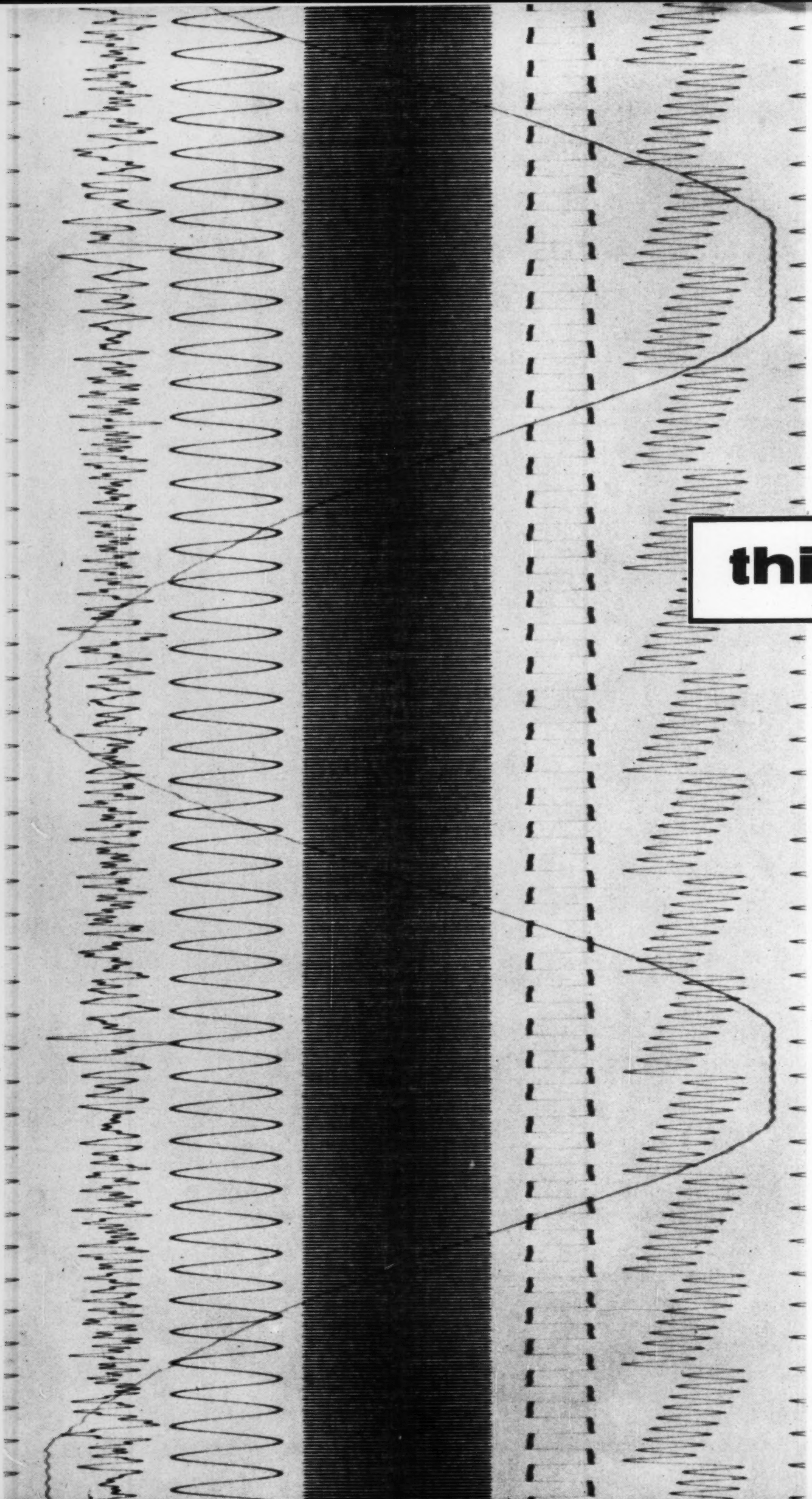

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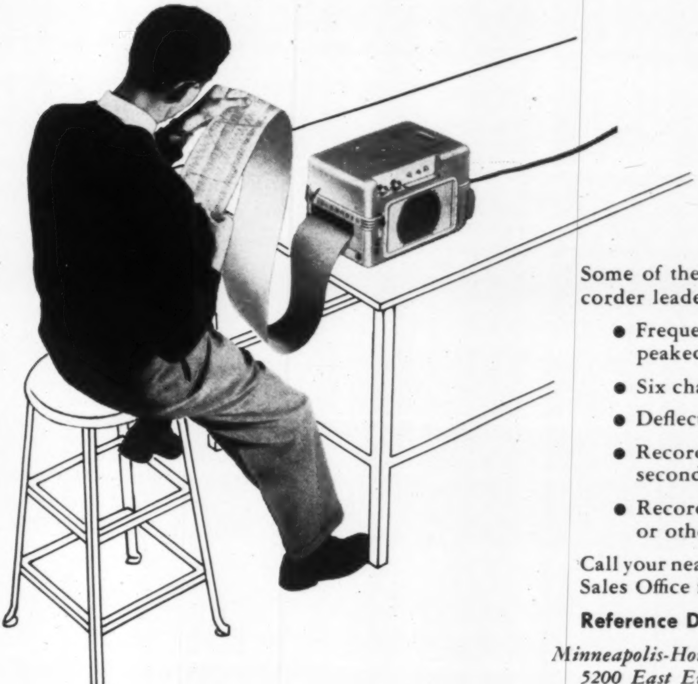
This Visicorder Oscillograph record* is a symbol of the leadership that is typical of Honeywell engineering. In laboratories all over the world the Visicorder's instantly-readable direct records are showing the way to new advances in rocketry, control, computing, product design and component test and in nuclear research.

*reproduced actual size, unretouched

The Model 906 Visicorder is years ahead of the trend. It is the first oscillograph that combines the convenience of direct recording with the high frequencies and sensitivities of photographic-type instruments. The Visicorder alone among oscillographs lets you monitor high-speed variables as they go on the record.

a record of leadership



Some of the general features which give the Visicorder leadership in the direct-recording field are:

- Frequencies from DC to 2000 cps without peaked amplifiers or other compensation
- Six channels plus 2 timing traces on 6″ paper
- Deflection 6″ peak to peak; traces may overlap
- Record speeds 0.2, 1, 5, and 25 inches per second, minute, or hour
- Records require no liquids, powders, vapors, or other processing

Call your nearest Minneapolis-Honeywell Industrial Sales Office for a demonstration.

Reference Data: Write for Visicorder Bulletin

Minneapolis-Honeywell Regulator Co., Heiland Division,
5200 East Evans Avenue, Denver 22, Colorado.

MINNEAPOLIS
Honeywell
HONEYWELL Heiland Division

For more information circle **34** on inquiry card.

CASH STANDARD
and CASH STANDARD STACON

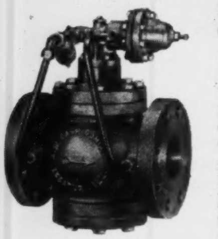
AUTOMATIC *Pressure, Hydraulic, Temperature, Process and Combustion Controls*

The A. W. CASH COMPANY, and its subsidiary, CASH STANDARD STACON CORP., under the trade marks CASH STANDARD and CASH STANDARD STACON, manufacture a complete line of automatic valves, regulators, controllers, governors, hydraulic valves, refrigeration back pressure valves and complete systems for process and combustion control. A few of the many items available are described on this page.

CASH STANDARD STREAMLINED REDUCING VALVE, TYPE 1000

Three principles used in this regulator assure high capacity and close pressure control: a streamlined inner valve which eliminates turbulence; straight-line flow through the valve housing; an aspirating effect which controls valve opening by amplifying slight pressure changes into large valve operating forces. Two types: 1000-HP (illustrated); 1000-LP with larger diaphragm for low pressures. Iron, bronze, steel or stainless steel body; iron, bronze or stainless steel trim. For steam, water, air, oil and most gases and chemicals. Eight sizes from ¼" x ¼" to 2" x 2½" with expanded outlet if desired.

CASH STANDARD PILOT-OPERATED, SELF-CONTAINED CONTROL VALVE, TYPE 10



Easily converted from a pressure reducing valve to a back pressure valve by simply switching control piping. Suitable for water, air, gas, oil or refrigerating fluids. Features dial type range selector for stabilizing control pressure. Iron, bronze or steel body; bronze, stainless steel or monel trim. Sizes, 2" to 12" with flanged ends and 2" to 3" with screwed ends.

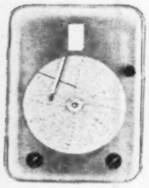
CASH STANDARD PILOT OPERATED PRESSURE REDUCING VALVE, TYPE 30-AP

For steam, air and most fluids. Pilot is normally operated by independent fluid. Manner of connecting control lines to pilot and installing reversible inner valve makes this a pressure reducing and regulating valve or a relief or back pressure valve, and determines whether main valve opens or closes with failure of operating fluid delivered to pilot. Air cooled or water cooled packing box. Iron, bronze or steel body; bronze or stainless steel trim. Screwed ends, sizes ½" to 3", flanged ends, sizes 1" to 12".

STACON SELF OPERATING TEMPERATURE REGULATOR, TYPE UBA

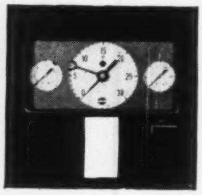
Double seat balance is obtained in a single seated valve by two equally opposed bellows in balance. Vapor filled thermostatic system with brass armored copper capillary and bulb. Type UBA available in sizes ¼", ⅜" and ½", screwed ends, and has temperature adjustment dial on the valve.

CASH STANDARD RECORDING CONTROLLER, TYPE 57



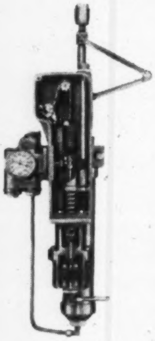
An air operated temperature controller with mercury, vapor, gas or organic liquid actuation. Temperature ranges from −350°F. to 1200°F. Available in 9" and 12" case size, spring or electric driven chart drive, on-off control or 1-100% proportional control. All units have push button nozzle cleaner; proportional controllers also have sapphire jewelled relay orifice with push button cleaner.

CASH STANDARD INDICATING CONTROLLER, TYPE 51



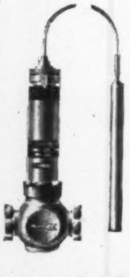
An air operated, mercury actuated proportional temperature controller. Temperature ranges from −40°F. to 1000°F. Calibrated set point adjustment, unit construction, air relay with sapphire orifice and push button cleaner, feedback typed proportional control with 1-100% band and differential gap. Also available with 1-150% proportional band combined with automatic reset action.

CASH STANDARD POSITIONER, TYPE 100



A sensitive controller to operate Balanced Valves, Butterfly Valves, Dampers, Stokers and other apparatus or may be interposed as a positioner between pressure or temperature pilot and apparatus being operated.

STACON SELF OPERATING TEMPERATURE REGULATOR, TYPE V



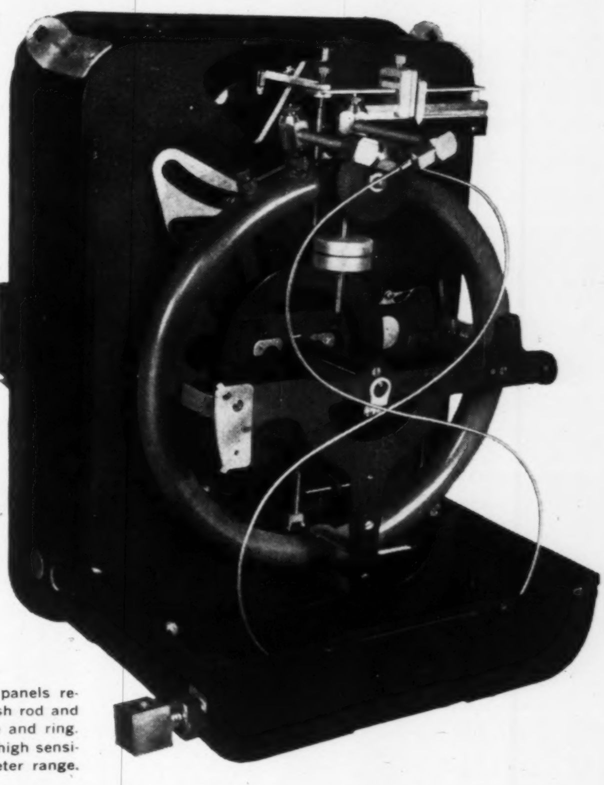
Features a liquid filled thermal system for high operating power and uniform throttling action, and has built-in overload protection. Available in 50°F. and 100°F. ranges from 25° to 325°F. Direct and reverse acting units ¼" to 1½" with screwed ends, and 2" to 4" with flanged ends.

A. W. CASH COMPANY **and its subsidiary, CASH STANDARD STACON CORP.**
P. O. Box 551
Decatur, Ill.

For more information circle **35** on inquiry card.

HAGAN RING BALANCE FEATURES—NO. 2

SAFE SENSITIVE METERING at 2500, 6000, 15000 PSIG



Rear of Ring Balance Meter with side and top panels removed to show S-tube arrangement. Note the push rod and resistant spring assembly, visible back of S-tube and ring. This feature of the Ring Balance makes possible high sensitivity at low flows and simple adjustment of meter range.

No question about it. The cylindrical tubing used to form the ring and S-tubes of the Hagan Ring Balance meter is the safe, sure means for containing high pressures. There are no gaskets or stuffing boxes to leak, blow out, bind or otherwise spoil this ideal design.

Pressure impulses are brought from the meter terminals to the ring through solid-wall S-tubes which, because of their special configuration and metal-to-metal fittings, provide safe, completely flexible connections and preserve the inherent high sensitivity of the meter.

0 10 20 30 40 50
HAGAN

New, rigid, weatherproof, die-cast, aluminum case. Four-piece back for complete accessibility.

Check these other Ring Balance features with your local Hagan office

1. High sensitivity at low flows due to unique range calibration system.
2. Ease of calibration under operating static pressures with factory-calibrated check weights. No more four-story water columns and telephones.
3. Sealing fluid density and level not critical. No eye-droppers required.
4. Interchangeable ring assemblies for full scale ranges from 0.5″ w.c. to 560″ w.c. Adjustment on any one ring over a 7:1 differential range.
5. Wide range computation and/or compensation by means of built-in, easily checked mechanisms available on most models.
6. Pneumatic or electric transmission also available.

Bulletin MSP-141 describes these features and the new design of the Hagan Ring Balance meter case. ASK US FOR IT.

HAGAN CHEMICALS & CONTROLS, INC.

HAGAN BUILDING, PITTSBURGH 30, PENNSYLVANIA
DIVISIONS: CALGON COMPANY, HALL LABORATORIES
IN CANADA: HAGAN CORPORATION (CANADA) LIMITED
OFFICES IN: MONTREAL, TORONTO, VANCOUVER, EDMONTON

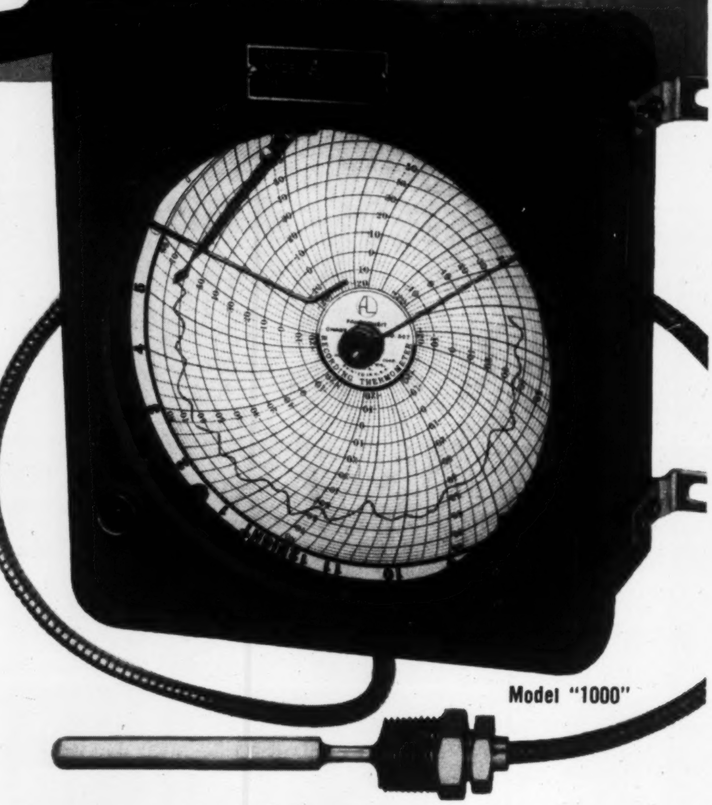
For more information circle **36** on inquiry card.

AUTO-LITE

TEMPERATURE RECORDERS...

Newly designed, Model "1000" Auto-Lite Recorder gives permanent proof of temperature behavior.

- 6" clear reading chart; various standard ranges from minus 40°F. to plus 550°F.
- 3 standard types; choice of 24-hr. or 7-day cycle.
- Electric or mechanical chart drive.
- With capillary tubing for remote reading. Priced from $49.50



Model "1000"

TEMPERATURE INDICATORS...

Auto-Lite offers many thermometer styles, permitting plant-wide temperature observation at low cost. Standard temperature ranges from minus 60°F. to plus 750°F. Send for latest catalog showing various types of Auto-Lite Indicators and Recorders.

Model F-1 temperature indicator — Rigid stem or capillary tubing for EYE-LEVEL remote reading. Priced from **$23.50**

THE ELECTRIC AUTO-LITE COMPANY
INDUSTRIAL THERMOMETER DIVISION
TOLEDO 1, OHIO
NEW YORK • CHICAGO • SARNIA, ONTARIO

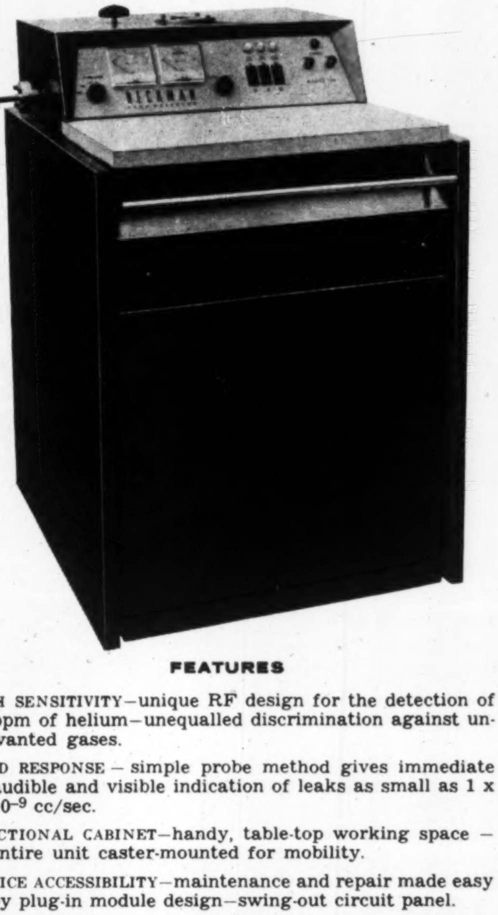
For more information circle **37** on inquiry card.

Beckman Microsensitive Instrumentation

Beckman's leadership is unchallenged in the production of ultrasensitive instruments for the detection, measurement, and recording of the infinitesimal. Two such instruments that stand alone in precision and reliability are the Beckman dc Breaker Amplifier and RF Leak Detector.

FOR THE DETECTION OF MINUTE LEAKS

Beckman/*RF Leak Detector*



FEATURES

HIGH SENSITIVITY—unique RF design for the detection of ppm of helium—unequalled discrimination against unwanted gases.

RAPID RESPONSE – simple probe method gives immediate audible and visible indication of leaks as small as 1 x 10^{-9} cc/sec.

FUNCTIONAL CABINET—handy, table-top working space — entire unit caster-mounted for mobility.

SERVICE ACCESSIBILITY—maintenance and repair made easy by plug-in module design—swing-out circuit panel.

TROUBLE-FREE LIFE—exclusive RF ion acceleration principle requires less rigorous operating voltage control, saves instrument wear.

BROAD APPLICATION—typical uses: production and quality control checks of compressors, coils, valves; hermetic seals of electronic components; pressure and vacuum systems for laboratory and process stream made possible by a wide variety of accessories.

For the full story on superior leak detection with the Beckman RF instrument, write for Data File P-10A-70.

BRIEF SPECIFICATIONS

Sensitivity	1 part Helium/million
Standard cc/sec	1x10^{-9}
Response Time	3 sec
Operating Power	115 v @ 6 amps, 60 cycle
Liquid Nitrogen	2 qts/8 hr. day
Size	25.6" x 30.4" x 41.0" (H)

Immediate delivery *on the RF Leak Detector and the complete line of accessories.*

FOR THE MEASUREMENT OF MICROVOLTS

Beckman/*dc Breaker Amplifier*

Model L/B14

FEATURES

HIGH SENSITIVITY—accurate control and measurement of dc and low frequency ac voltages in the microvolt and fractional microvolt regions.

RAPID RESPONSE—superior to suspension galvanometer—faster, better response than any previous instrument.

HIGH SIGNAL-TO-NOISE RATIO—lowest noise level and greatest zero stability of any dc amplifier commercially available.

UNIQUE FLEXIBILITY—adaptable to multiple instrument installations—directly drives standard recorders, relays, and meters.

BROAD APPLICATION—typical uses: replacement for galvanometers in bridge circuits for measuring Hall effect; radiation measurements with barrier layer cells, phototubes, and thermocouples; measurement of nerve voltages in blood flow meters.

For the complete story on the precision measurement and control of microvolts with Beckman dc Breaker Amplifiers, Model L/B14 or Model L/B10A, write for Data File P-10B-70.

BRIEF SPECIFICATIONS

Input	option from 5 ohms to 100,000 ohms
Zero Stability	drift <0.005 mv/8 hr. day
Gain Stability	<0.3%/8 hr. day
Output	linear to approx. 2 v @ 500 ohms linear to approx. 4 v @ ∞ impedance
Noise Level	at Johnson noise limitations
Discrimination	1:1000 against 60-cycle pickup
Controls	20-position gain control–4 db/position 7 test signals–calibration 0.1 µv to 100µv
Power Requirements	110 v, 50 or 60 cycles, 20 watts

Beckman®

Process Instruments Division
2500 Fullerton Road, Fullerton, California
a division of Beckman Instruments, Inc.

BORG Precision Protects YOU!

Specify Borg Precision Potentiometers

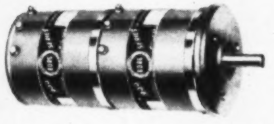
BORG 900 SERIES MICROPOTS

Extreme Accuracy • Finer Resolution • Longer Lived

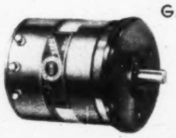
Advantages? You bet! High precision . . . extreme accuracy . . . finer resolution . . . low torque and long life under severe and adverse environmental conditions are but a few of the advantages found in Borg 900 Series Micropots.

Borg Micropots have long been preferred for many applications including missiles, aircraft instrumentation, radar and sonar equipment, communications and electronic devices, computors and scientific apparatus.

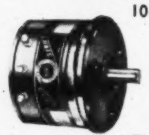
Borg has a 900 Series Micropot to fit your needs . . . readily available in production quantities. Borg has geared production to assure you fast delivery of any model in any quantity. Let us send you more information and the name of your nearest Borg "Tech Rep".



GANGED



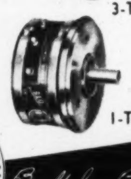
10-TURN



3-TURN

MICROPOT
JANESVILLE, WIS
MODEL 990

Trimming MICROPOT



1-TURN

Write for Complete Engineering Data
CATALOG BED-A56

BORG EQUIPMENT DIVISION

THE GEORGE W. BORG CORPORATION
JANESVILLE, WISCONSIN

ELECTRONIC-MECHANICAL
BORG
EQUIPMENT

Built by Borg

MOTORS
MICROPOTS
MICRODIALS

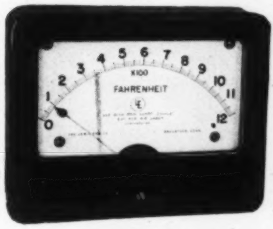
For more information circle **39** on inquiry card.

LEWIS

AUTOMOTIVE AND INDUSTRIAL TEMPERATURE MEASURING EQUIPMENT

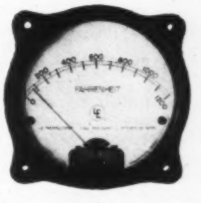
Sturdy Dependable Indicators —Suitable For Use In Moving Vehicles or For Permanent Installation

This instrument has been used extensively by the leading motor-car manufacturers for road testing on the "Proving Grounds" — where performance counts. Housed in a rectangular bakelite case, this reliable, fully compensated pyrometer is furnished with 6 in. hand drawn scales for greater accuracy. The Model 58PY is available for use with all standard thermocouple materials, in many ranges to suit the most exacting application.



MODEL 58PY

Manufactured with the same type of movement as our aircraft pyrometers, the Model 23B pyrometer is well suited for use in moving vehicles and has been successfully used in many marine diesel installations for measuring exhaust temperatures. It is housed in a 4 in. round bakelite case that is flanged for panel mounting, and is available in several ranges for use with various thermocouple materials.



MODEL 23B

The Model 20B series of indicators are patterned after our standard aircraft instruments and are supplied with 3" round steel cases suitable for panel installation. These compact, sturdy indicators have 2⅛ in. scales, are fully cold-end compensated and are available in many ranges for use with various thermocouple materials.

FAHRENHEIT
0 1 2 3 4 5 6

MODEL 20B

The Model 62RT4F resistance thermometer is a sturdy easy-to-read instrument with a 6 in. hand drawn scale. It is suitable for use in moving vehicles and is excellent for flight-test work. It is operated by an ordinary dry cell and is calibrated to standard "AN" bulb curves for various ranges in fahrenheit or centigrade.

MODEL 62RT4

THERMOCOUPLES for use with the above indicators are available in many styles for special applications. We have developed a complete line of aircraft, industrial and automotive thermocouples and would be pleased to offer our recommendation for your application.

THERMOCOUPLE LEAD WIRE for connecting thermocouples to the indicators is manufactured in iron-constantan, copper-constantan or chromel-alumel material with standard and special insulation. Use Lewis lead-wire with Lewis instruments and thermocouples for best results.

RESISTANCE BULBS for use as sensing elements for the 62RT4 thermometers are available in several types for various applications, for measuring free air or liquid temperatures. We invite inquiries on your application.

THE LEWIS ENGINEERING CO.

Specialists in Electrical Temperature Measurements

NAUGATUCK, CONNECTICUT

For more information circle **40** on inquiry card.

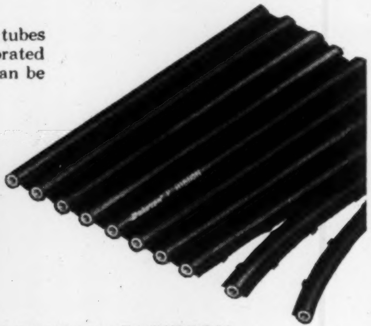
Dekoron® Products Division

SAMUEL MOORE & CO. • MANTUA, OHIO

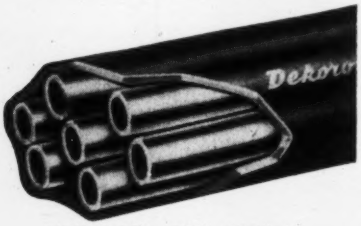
Telephone Crestwood 4-2276

DEKORON "M" RIBBON
10 individual copper or aluminum tubes encased in chemically resistant, perforated plastic sheath. One or more tubes can be "peeled" off without special tools.

Dekoron M RIBBON



DEKORON "P" RIBBON
Same exclusive ribbon construction as "M" Ribbon except that individual lines are made of color-coded polyethylene. For all standard instrument line pressures.



DEKORON METL-COR
Instrument line harness with tube combinations of up to 19 individual copper or aluminum tubes covered with chemically resistant sheath of polyethylene plastic.

CONDENSED SPECIFICATIONS

COPPER TUBING

TO ASTM B68 Type DHP specifications and pressure tested to ASTM B75 specifications.

¼ OD x .030" in 50, 100, 500 and 1000' lengths
⅜ OD x .032" in 50, 100 and 500' lengths
½ OD x .035" in 50 and 100' lengths

ALUMINUM TUBING

Drawn, seamless, annealed 5050-0 Utilitube. Sizes and lengths:

¼ OD x .032" in 50, 100 and 500' lengths
⅜ OD x .035" in 50, 100 and 500' lengths

POLYETHYLENE TUBING

High molecular weight, virgin polyethylene. Sizes and lengths:

¼ OD x .040" in continuous lengths in increments of 100' to 1000'
⅜ OD x .062" in continuous lengths in increments of 100' to 1000'
½ OD x .062" in continuous lengths in increments of 100' to 500'

PLASTIC SPECIFICATIONS
Polyethylene

Used as the sheath on single-line tubing, Metl-Cor and for black "P" Tubing, this polyethylene meets following specifications: ASA, REA, IPCEA requirements on weather resistance, chemical resistance, heat stability, and surpasses requirements under ASTM 1248-52T. Polyethylene, other than black, contains no ultraviolet inhibitor and should not be used outdoors. Black polyethylene is unaffected by ozone. This polyethylene remains flexible below —100°F.

Polyvinyl Chloride

Used as the sheath on Pol-Cor, "M" Ribbon, "P" Ribbon and single-line tubing, this polyvinyl chloride meets UL, ASTM, IPCEA, AN-C-168, AN-J-C-48A, J-C-129, and MIL-C-915 specifications.

Factory stocks of products described in this bulletin are made of materials that comply with specifications outlined above. Other materials and sizes, tube combinations, etc., are available on special order. Manufacturer reserves right to alter specifications without notice and incurring liability for products already shipped.

ACCESSORIES

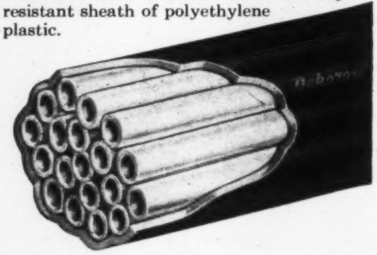
To facilitate installation of Dekoron products, we supply a line of tubing accessories which includes the following: junction and union boxes, E-Z fittings for plastic tubing, "P" Tubing clips, reel stands, harness straighteners, corner troughs and other aids for cutting installation costs.

INSTALLATION DATA

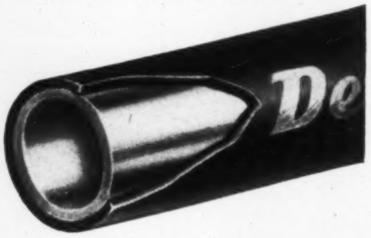
Complete data regarding bending radii, centers of support, hangers and clamp sizes and types, and various proven methods of installation are available on request.

RESEARCH AND DEVELOPMENT

Our Research and Development Department is constantly striving to design and develop new and improved products to enable instrument users to cut installed costs to the minimum and to achieve longer service-free life. The facilities of this department are available to you now to develop products and techniques to meet your specific requirements. Since our development program is continuous, we may already have solved your problem. (Always check with the Dekoron Products Division first for the answers to your instrument tubing needs.



DEKORON POLY-COR
Bundle of 4, 7, 10, 14 or 19 individual polyethylene tubes covered with vinyl plastic. Installs as easily as electric wiring.



DEKORON TUBING
The original plastic-coated metal instrument tubing. Available with copper, aluminum or steel core tube. Resists chemical attack, outlasts expensive alloy tubing.

Dekoron "P" tubing
SAMUEL MOORE & CO
MANTUA, OHIO

DEKORON "P" TUBING
Highest quality single-line polyethylene instrument tubing. Easy to install; requires no special tools.

Dekoron is more than a name for chemically resistant instrument tubing. The Dekoron trademark now identifies a complete line of tubing products—instrument line harness, tubing, fittings, and accessories for tubing up a pneumatic system. Dekoron products cost less to buy . . . less to install . . . last longer. *So tube up with Dekoron products—and watch your costs come tumbling down.*

For more information circle **41** on inquiry card.

FIRST *Really New* RELAY

TO MEET TODAY'S RIGID REQUIREMENTS
PERFECTED BY THE

A. W. HAYDON CO.

This miniature, hermetically-sealed, general purpose relay has been designed with increased magnetic force to provide higher contact pressures and greater travel than are usually found in this type. Special care has been taken to assure reliable operation in low level circuits.

Rated Load: 2 amperes, 28 Volts DC, resistive. Ambient Temperature Range: 65 C to 125 C. Vibration: 15g to 2,000 cps — no contact chatter. Shock: 50g, 11 milliseconds — no contact chatter. Write for Bulletin AWH RY 1001.

electro-poise.
RELAY
TYPE 300 RELAY
PATENTS PENDING
THE A.W.HAYDON COMPANY
WATERBURY, CONN.

TYPE 300 COUNTERBALANCED RELAY

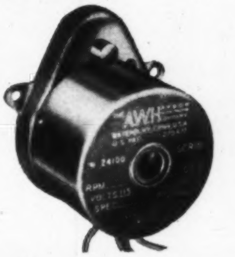
WITH SEPARATELY SEALED CONTACT CHAMBER

Uniquely designed with contacts isolated from coil. Contacts can never become contaminated with vapors or gas from organic insulating materials.

TIMING AND CONTROL DEVICES BY THE A. W. HAYDON COMPANY ARE RECOGNIZED AS THE MOST DEPENDABLE PERFORMERS IN THE FIELD.

400 CYCLE MOTORS

Reversible — Light weight (8 ounces). 115 volts ± 10%; 55 milliamps. Torque: 0.025 oz-in at 3000 rpm. Meet Military Requirements. Write for Bulletin AWH MO 803.

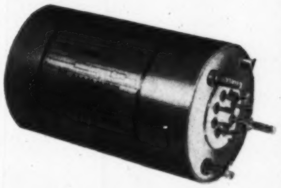


MINIATURE HERMETICALLY SEALED TIMERS

Supplied in 2½" diameter housing. Optional mounting and electrical termination.

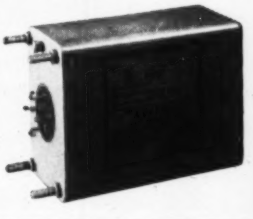
TIME DELAY RELAYS
Single or multiple switching. Delay periods from 2 seconds to 3 hours. Write for Bulletin AWH TD 400.

REPEAT CYCLE TIMERS
Single or multiple switching. Wide Range of Time Cycles. Write for Bulletin AWH RC 200.

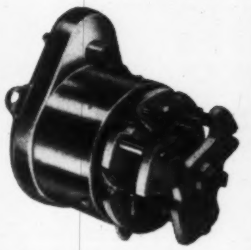


PROPORTIONAL DELAYED RESET TIME DELAY RELAY

Provides a controlled reset rate. Designed to meet special applications. Hermetically sealed or enclosed in dust cover. Meets military requirements. Write for Bulletin AWH TD 402.

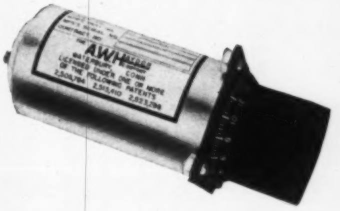


GOVERNED DC MOTORS



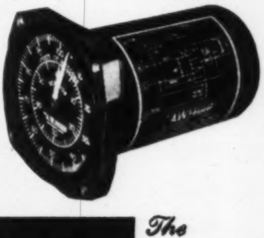
The A. W. Haydon Company now offers 3 series of Chronometrically Governed DC Motors. Each designed to do the same job in a different application.
5700 Series — non-military applications where extreme temperature, vibration and shock are not experienced.
5600 Series — Aircraft and military applications where extreme temperature and moderate vibration and shock are encountered.
5800 Series — Aircraft and missile applications where extreme temperature, vibration, and shock are encountered. Write for Bulletin AWH MO 800, -801, 802, -804.

SPECIAL TIME DELAY RELAY



Supplied in 2.2" diameter housing. Precision unit: ± 1% accuracy. Meets military requirements. Adjustable over wide range. Write for Bulletin AWH TD 500.

STOP CLOCKS



20-30 Volts DC. Precision Movement — Electrical Reset Temperature Range -65°F to 185°F. Option on mounting and electrical termination. Write for Bulletin AWH ET 700.

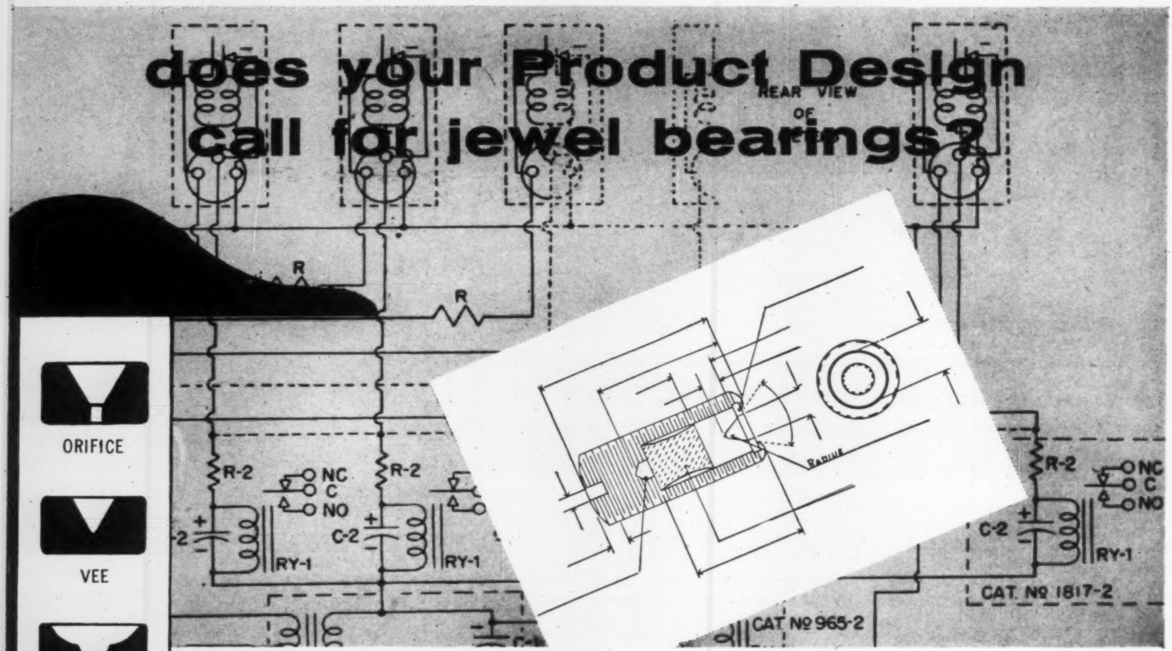
FOR FULL PARTICULARS ON COMPLETE LINE OF THE A. W. HAYDON COMPANY'S ELECTRO-MECHANICAL DEVICES, WRITE FOR CATALOG, DEPT. IAH.

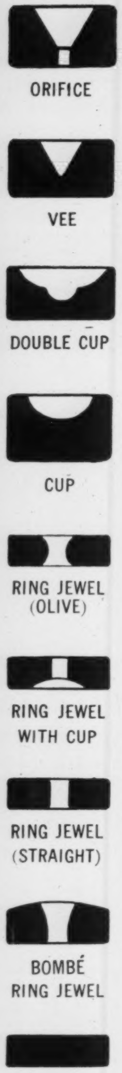
The
A. W. HAYDON
COMPANY
224 NORTH ELM STREET
WATERBURY 20, CONNECTICUT

Design and Manufacture of Electro-Mechanical Timing Devices

For more information circle **42** on inquiry card.

does your Product Design call for jewel bearings?





If so . . . Bird precision jewels and jewel assemblies can improve your product design by . . .

Lowering bearing friction • Eliminating corrosion • Increasing accuracy • Increasing resistance to shock • Decreasing wear • Eliminating distortion • Lowering costs • Providing electrical isolation

Bird sapphire and borrosilicate glass precision jewel bearings are made in a wide range of standard types, sizes, and complete assemblies — or custom-built to your specifications. Special mounting techniques provide exact tolerance jewel assemblies, mounted or set in bushings or screws, ready for assembling into your product without further inspection.

Jewels mounted with resilient silicone rubber or spring cushions provide additional protection from shock and vibration. Cushioned jewels reduce the amount of jewel bearing damage during assembly, prevent possible damage to pivot or bearing when the pivot bottoms, and permit mounting of any style bearing.

Because of the exact tolerance, maintained through the most rigid quality-control methods, Bird jewels are used by the foremost manufacturers of electrical, aircraft, and timing instruments — and recorders.

Typical products include:

- Aircraft Instruments
- Ammeters
- Weather Recorders
- Voltmeters
- Wattmeters
- Compasses
- Timers
- Dial Gages
- Test & Recording Instruments
- Marine Instruments

Our engineering staff is at your service for all small bearing problems. A request on your letterhead for Bulletin 100-6 will receive our prompt attention.

Richard H. Bird & Co., Inc.
1 Spruce Street, Waltham 54, Mass.

SAPPHIRE & GLASS JEWELS • PRECISION GLASS GRINDING
JEWEL MOUNTING & ASSEMBLY

For more information circle **43** on inquiry card.

about this 1958
Instruments and Automation
BUYERS' GUIDE

This 1958 I&A Buyer's Guide is the 15th edition of a directory which has assumed a position as the most complete and authoritative source for instruments and automation (control) equipments. It contains two basic parts:

1. Index Section—telling "who makes what." Here, all instruments and control equipments are listed alphabetically, giving the names of all manufacturers who make, let us say, "Pressure Recorders."

Indexing System—all listings are made by basic variable. In other words, look for "pressure," "temperature," "flow," "level," "analytical instruments," etc. DO NOT look for "instruments," "gages," "meters," "indicators," etc., except for the special case of general-purpose instruments, such as "Recorders." This new approach—a listing by variable—has necessitated a complete revamping of the previous indexes—and will necessarily produce a few omissions for which we beg the reader's indulgence. They will be ironed out as we discover them and as you tell us about them.

2. Address Section—telling the address of the company desired as a source for the equipment located in the Index Section. Here you will find the addresses of about 3200 companies. When seeking a specific item, it will pay to drop a note to all the companies listed as sources for the item desired. Each has its specialties and specialized features.

Further Service—if you cannot locate the product or the manufacturer, or if you are seeking a rare or exotic instrument, refer your problem to our Reader Service Department, Instruments Publishing Company, 845 Ridge Avenue, Pittsburgh 12, Pa.

INDEX SECTION

ABRASION MACHINES and TESTERS
Amer. Instr. Co.
Amthor Testing
Atlas Electric Devices
Bachmann Co., Eric R.
Baldwin-Lima-Hamilton
Custom Scientific Insts.
Fidelity Mach. Co.
Gardner Laboratory
GE
Larson Instr. Co.
Morehouse Machine Co.
Olsen Testing Machine
Pacific Scientific
Riehle Div.
Scott Testers, Inc.
Shawmut Engrg. Co.
Soiltest, Inc.
Suter, Alfred
Taber Instr. Corp.
Testing Machines, Inc.
Tensitron, Inc.
Universal Aviation
U. S. Testing Co.

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Armour & Co.
Baker & Co.
Black & Decker Mfg.
Blanchard Mach. Co.
Carborundum Co.
Chicago Wheel & Mfg.
Cratex Mfg. Co.
Dixon, Inc.
DoAll Co.
Engis Equipt. Co.
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Hamilton Watch
Hirschmann Co.
Industrial Abrasives
Minnesota Mining & Mfg.
Pratt & Whitney
Raybestos-Manhattan
Spaulding Fibre Co.
Stow Mfg. Co.
U. S. Rubber
White Dental Mfg.

ABSOLUTE PRESSURE, see Pressure, Absolute

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Burrell Corp.
Gurley, W. & L. E.
Hallikainen Instruments
Humboldt Mfg. Co.
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Mohawk Electronic
Nankervis Co.
Penn Optical & Instr.
Phoenix Prec. Instr.
Photovolt Corp.
Precision Scientific
Rubicon Co.
Special Instruments Lab.
Testing Machines, Inc.
Williams App. Co.

ACCELERATORS, Linear and Rotational
Associated Testing Labs.
Bendix Aviation Corp.
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Crescent Engrg. & Res.
Donner Scientific
Edcliff Instruments
Engis Equipt. Co.
Erwood, Inc.
Ford Instr. Co
GE X-Ray Dept.
Genisco Inc.
Globe Industries
Greenleaf Mfg.
High Voltage Engrg. Corp.
Kay Electric
Kollsman Instr. Corp.
Miljan, Inc.
Ram Meter, Inc.
Schaevitz Engineering
Varian Associates

ACCELEROMETERS, Linear
Aero Electronics
AiResearch Mfg. Co.
Allied Prods. Div.
Amer. Electronics Mfg.
Arma Div.
Atlantic Research Corp.
Automatic Div.
Avion Div.
BJ Electronics
Bell Aircraft Corp.
Bendix-Pacific
Bendix, Pioneer-Central
B & F Insts.
Bourns Labs.
Brush Electronics
Burton Mfg. Co.
Calidyne Co.
Cambridge Instr. Co.
Cedar Engrg., Inc.
Chesapeake Instr. Corp.
Colvin Laboratories
Consol. Electrodynamics
Crescent Engrg. & Res. Co.
Daystrom-Pacific
Donner Scientific
Edcliff Instruments
Electro-Mec Lab.
Electronics & Engrg. Serv.
Endevco Corp.
Engineering Res. Assoc.
Engrg. Res. & Devel.
Engis Equipt. Co.
Epic Inc.
Erwood, Inc.
Fairchild Cont. Corp.
Ford Instr. Co.
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Genisco Inc.
Giannini & Co.
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Hathaway Instr. Co.
High Voltage Engrg.
Humphrey, Inc.
Impact Register Co.
Impact-O-Graph Corp.
Industrial Electronics
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Jack Scient. Instr. Co., Bill
Kearfott Co., Inc.
Kistler Instr. Co.
Kollsman Instr. Corp.
Leonard Inc., Wallace O.
Massa Labs.
Matisa Equipt. Co.
Maxson Instr. Div.
Minatron Corp.
Minneapolis-Honeywell, Boston Div.
Mohawk Electronics
Norden-Ketay
Northam Electronics
Pace Engrg. Co.
Pacific Scientific
Rahm Instruments
Ram Meter, Inc.
Reeves Instr. Corp.
Rutico, Inc.
Sanders Assocs.
Schaevitz Engineering
Scientific Enterprises
Scott, Inc., Hermon Hosmer
Servomechanisms, Inc.
Statham Labs.
Sterling Prec. Instr.
Summers Gyroscope
Ten Bosch, Inc.
Topp Industries
Ultradyne Engrg. Labs.
Van Dyke Insts.
Vectron, Inc.
Vibra Shock Corp.
Wiancko Engrg. Co.

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Allied Products Div.
Atlantic Research Corp.
Bendix Aviation Corp.
Cambridge Instr. Co.
Cedar Engrg., Inc.
Chesapeake Instr. Corp.
Commercial Research
Consol. Electrodynamics
Crescent Engrg. & Res.
Daystrom-Pacific
Donner Scientific
Edcliff Instruments
Erwood, Inc.
Fairchild Cont. Corp.
Flight Research Engrg.
GE, Apparatus Sales
Genisco Inc.
Giannini & Co.
Gulton Industries
Gyroscopes, Inc.
Hathaway Instr. Co.
Humphrey, Inc.
Instr. Dev. Labs.
Jack Scient. Instr. Co., Bill
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Kearfott Co., Inc.
Kistler Instr. Co.
Kollsman Instr. Corp.
Minneapolis-Honeywell, Boston Div.
Norden-Ketay
Pacific Scientific Co.
Ram Meter, Inc.
Reeves Instr. Corp.
Schaevitz Engineering
Scientific Enterprises
Square D Co.
Summers Gyroscope
Statham Labs.
Sterling Prec. Instr. Corp.
Trans-Sonics, Inc.
Vectron, Inc.
Wiancko Engrg. Co.

ACIDIMETERS, see pH

ACOUSTIC STANDARDS, see Standards, Acoustic

ACOUSTIMETERS, see Sound Indicators

ACTUATORS, Electric, see Motors, also Solenoids

ACTUATORS, Hydraulic and Pneumatic, see Cylinders, also Motors, also Valve-Operating Devices

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Dillon & Co.
Fish-Schurman
Gardner Lab.
Koehler Instr. Co.
Moore Corp., John B.
Olsen Testing Machine
Physicists Research
Scott Testers, Inc.
Testing Machines, Inc.
Thwing-Albert
U. S. Testing Co.

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Alfax Paper & Engrg.
Avion Div.
Bendix, Eclipse-Pioneer
Instruments Corp.
Kollsman Instr. Corp.
Matisa Equipt. Co.

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Edcliff Instruments
Instruments Corp.
Moeller Instr. Co.
Norden-Ketay

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Passaic Analytical Labs.
Phoenix Prec. Instr.
Pittsburgh Lectrodryer
Pritchard & Co.
Radex Corp.
Robbins Aviation
Schaevitz Engineering
Schrader's Sons, A.
Selas Corp. of Amer.
Staplex, Air Sampler Div.
Watts Reg. Co.

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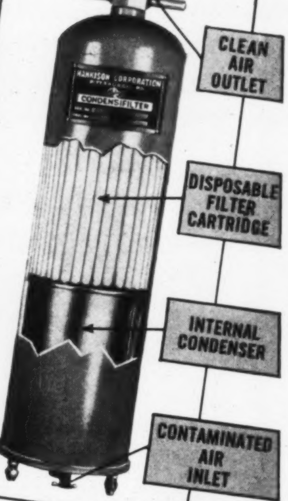

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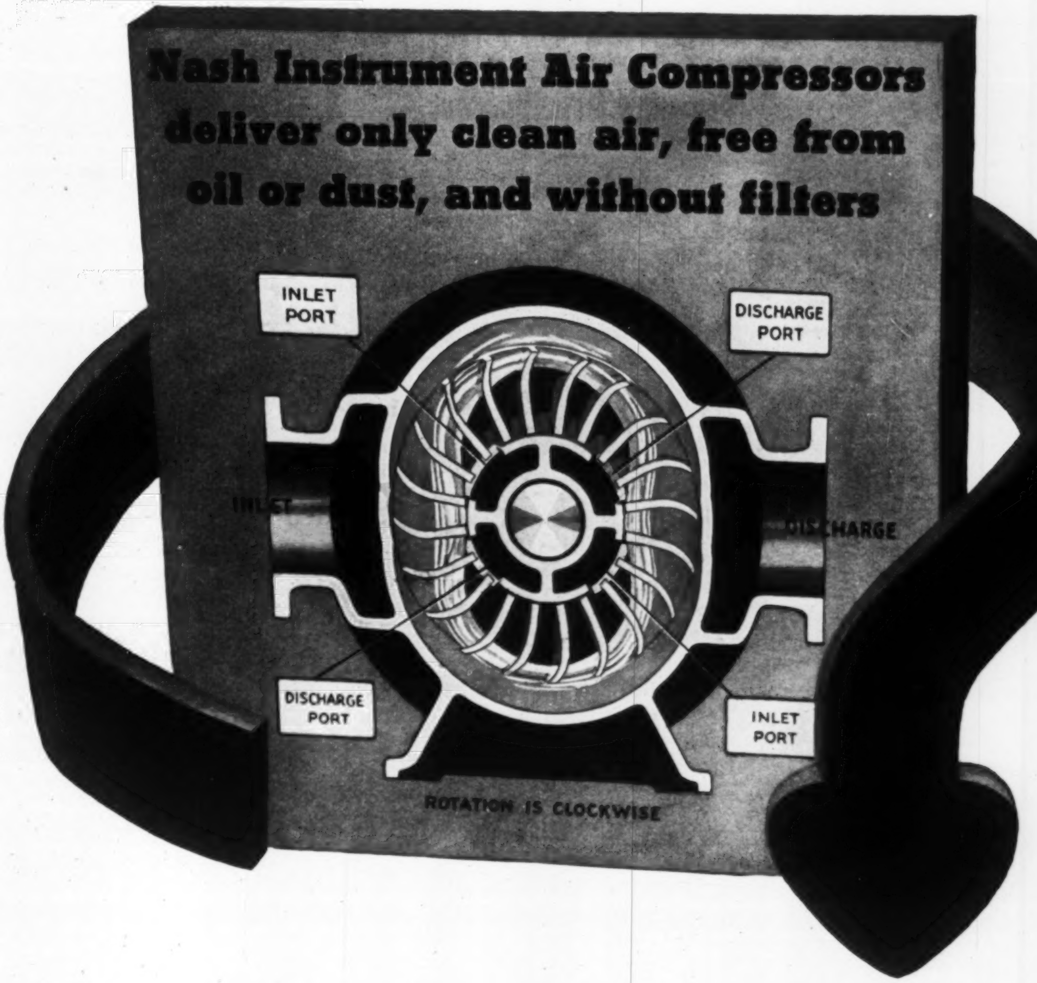
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BULLETIN No. 122
BULLETIN No. 112
BULLETIN No. 133

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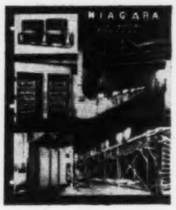

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BULLETIN No. 112

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NIAGARA Aero
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BULLETIN No. 130

COOLING AND FREEZING

NIAGARA No-Frost METHOD

Bulletins describe Niagara "No-Frost" method; production of extreme low temperature for industrial uses or food freezing, precooling and storage.

BULLETIN No. 95
BULLETIN No. 105

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NIAGARA
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AEROPASS CONDENSER
FLUID COOLER

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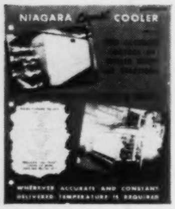
BULLETIN No. 111
BULLETIN No. 123
BULLETIN No. 131

LIQUID COOLING


NIAGARA
COOLER
WHEREVER ACCURATE AND CONSTANT DELIVERED TEMPERATURE IS REQUIRED

Cooling for chilled water or solutions, with elimination of freeze-up danger, with rapid chilling of large fluid volume and close temperature control.

BULLETIN No. 104

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NIAGARA Aero
VAPOR CONDENSER

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BULLETIN No. 129-R

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SERIES 1100
SERIES 1200

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BULLETIN No. 89

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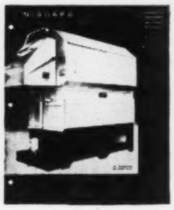

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BULLETIN No. 124
BULLETIN No. 132

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Stratos Div.
Trerice Co., H. O.
U. S. Gauge Div.
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White Dental Mfg. Co.
Worthington Corp.

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Daco Instrument
Dormitzer Elec. & Mfg.
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Hankison Corp.
Industrol Corp.
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Lear Inc.
Lennard Co.
Logan Engrg. Co.
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New Jersey Meter Co.
Passaic Analytical Labs.
Pittsburgh Lectrodryer
Pritchard & Co.
Robbins Aviation
Selas Corp.
Specialties Inc.
Swanson Engrg. Co.
Temp. Engrg. Corp.

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AIR METERS, see Flowmeters, Positive Displacement

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Amer. Mach. & Foundry
Bush Assoc., G. F.
Dietert Co.
Fisher Scientific
GE, Apparatus Sales
Hill & Co., E. Vernon
LaBine & Co., Arthur S.
Mine Safety Appliances
Northam Electronics
Phoenix Prec. Instr.
Process & Instruments

AIR POLLUTION INSTRUMENTS, including Samplers

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Anton Electronics Labs.
Baldwin-Lima-Hamilton
Bausch & Lomb
Beckman Instrs.
Beckman & Whitley
Bendix-Friez
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Consol. Electrodynamics
Corning Glass Works
David Insts. Div.
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Federal Pneumatic Systems
Ferner Co.
Fisher Scientific
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Hastings-Raydist
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Lennard Co.
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Mine Safety Appliances
Modern Lab. Equipt. Co
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Phoenix Prec. Instr.
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Rubicon Co.
Sargent & Co.
Scientific Glass App.
Scientific Instr. Co.
Staplex, Air Sampler Div.
Taller & Cooper
Tracerlab Inc.
Victoreen Instr. Co.
Willson Products
Zeiss, Inc., Carl

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Ingersoll-Rand
Kahn & Co.
Penn. Pump & Comp. Co.
Spivey, Inc., James S.
Warren Bros. Mfg. Co.
Westinghouse Air Brake
Worthington Corp.

AIR SAMPLERS, see Air Pollution

AIR VELOCITY METERS, see Anemometers, also Aircraft Instruments

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Airborne Instruments Lab.
Aircraft Electronics
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Avion Div.
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Benson-Lehner
Brush Electronics
Cal-Tronics
Carroll Co.
Century Geophysical
Collins Radio
Consol. Electrodynamics
Cook Electric
Electronic Assocs.
Electronic Tube Corp.
Farrand Optical
GE
General Mills Inc.
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Gordon Enterprises
Hathaway Instr. Co.
Heiland Div.
Impact-O-Graph Corp.
Impact Register Co.
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Land-Air Inc.
Leeds & Northrup
Librascope
Matisa Equipt. Co.
Maxson Corp.
Minneapolis-Honeywell, Boston Div.
Norden-Ketay
Northrop Anaheim
Pacific Scientific
Reeves Instr. Corp.
Servo Corp. of Amer.
Spivey, Inc., James S.
Techno Instr.
Testa Mfg.
Topp Industries
Ultradyne Engrg. Labs.
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Aero Electronics Co.
Aircraft Radio Corp.
AiResearch Mfg. Co.
All-Tronics
Amer. Mach. & Foundry
Amer. Paulin System
Amer. Research
Amthor Testing Instr.
Autron Engrg., Inc.
Avien, Inc.
Baldwin-Lima-Hamilton
Bellmore Gear Corp.
Bendix, Eclipse-Pioneer
Bendix, Pioneer Central
B & H Instr. Co.
Bogue Electric
Boonton Radio
Borden Engrg. Div.
Burton Mfg. Co
Bush Assocs.
Cal-Tronics Corp.
Collins Radio Co.
Consolidated Avionics
Davenport Mfg. Co.
Daystrom-Pacific
Decker Aviation
DuMont Labs., Allen B.
Electro, Instr., Inc.
Engrg. & Res. Corp.
Erdco Engrg. Co.
Fuess, Inc.
Gadgets, Inc.
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GE, Apparatus Sales
Genisco Co.
Gray Instr. Co.
Green Rectifier Co.
Guardian Elec. Mfg.
Hass Bros. Instr. Co.
Hathaway Instr. Co.
Hewson Co.
Howell Instr. Co.
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Ideal Lab. Tool
Instr. Assocs.
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Jaeger Watch
Jordan Electronics
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Kearfott Co., Western Div.
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Liquidometer Corp.
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Mansfield & Green
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Murphy & Miller
Nankervis Co.
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Opad Electric
Orban Co., Kurt
Pioneer Instr. Co.
Radio Frequency Labs
Ram Meter, Inc.
Seaboard Elect. Prod.
Simpson Electric
Specialties, Inc.
Standard Products
Sun Electric Corp.
Task Corp.
Technical Electronics Corp.
Tenney Engrg. Co.
Thwing-Albert

Transval Engrg. Corp.
Trimount Instr. Co.
Triplett Electcl. Instr.
United Mfg. Co.
U. S. Testing Co.
Veeco Vacuum Corp.
WacLine, Inc.
Walker Div.
Wallace & Tiernan
Wolfe & Mann

AIRCRAFT INSTRUMENT TOOLS

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Airdraulics Engineering
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Bendix, Eclipse-Pioneer
Bendix, Pioneer Central
Burndy Engrg. Co.
Cal-Tronics Corp.
Cedar Engrg., Inc.
Decker Aviation
Dixon, Inc.
Engis Equipt. Co.
Farrand Optical
Gadgets, Inc.
GE, Apparatus Sales
Ideal-Aerosmith
Industrial Engrg. Corp.
Instr. Assocs.
Jo-Line Tools
Kollsman Instr. Corp.
Lenox Instrument Co.
Lewis Engrg. Co.
Marshall Co.
Nilsson Gage Co.
North Amer. Instr. Co.
PIC Design Corp.
Progressive Service Co.
Radio Frequency Labs.
Sheffield Corp.
Sperry Gyroscope
Standard Products, Inc.
Starrett Co., L. S.

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Altimeters, Artificial Horizons, Automatic Pilots, Ice Alarms, Inclinometers, Intervalometers, Rate of Climb Instruments, Turn and Bank Indicators (see also Navigation Aids, also Radar)

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Ace Electronics
Advanced Electronics, Inc.
Aero Electronics
Aero Research
Aeroquip Corp.
Airborne Instruments Lab.
Aircraft Electronic Assocs.
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AiResearch Mfg.
Alden Electronic
Allard Instruments
All-Tronics
Amer. Electroneering
Amer. Electronics
Amer. Meas. Insts.
Amer. Paulin System
Amer. Res. Corp.
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Arma Div.
Atlantic Research Corp.
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Autonetics Div.
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Avien, Inc.
Avion Div.
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Bailey Meter Co.
Barton Instr. Co.
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Bellmore Gear Corp.
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Bendix-Friez
Bendix, Pioneer Central
Boonton Radio
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Bruno-N. Y. Indust.
Builders-Providence
Burton Mfg.
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Carroll Co.
Cedar Engrg., Inc.
Chatham Conts. Corp.
Cities Service Oil Co.
Coleman Instruments
Collins Radio
Colvin Labs.
Consolidated Avionics Corp.
Control Specialists, Inc.
Cook Electric
Custom Scient. Insts.
Datran Electronics
Daystrom Instrument
Daystrom-Pacific
Donner Scientific
Edcliff Instruments
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Engineering & Res. Corp.
Engis Equipt. Co.
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Federal Telephone & Radio
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Ferner Co.
Fish-Schurman
Flight Research Engrg.
Flow Corp.
Ford Instr. Co.
Fulton-Sylphon Div.
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Gadgets Inc.
Geier & Bluhm
GE
General Mills Inc.
Genisco Inc.
Giannini & Co.
Goodyear Tire
Gordon Enterprises
Gorrell & Gorrell
Guardian Electric
Hanson-Gorrill-Brian
Hastings-Raydist
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Haydon Co., A. W.
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Helipot Div.
Hickok Electrical Instr.
Humphrey, Inc.
Ideal-Aerosmith
Ideal Lab. Tool
Illinois Testing Labs.
Impact Register Co.
Industrial Test Equipt.
Instr. Assocs.
Jaeger Watch
Jarvis Electronics
Karnish Instr. Sales
Kearfott Co.
Kearfott Co., Western Div.
Kollsman Instr. Corp.
Lear, Inc.
Leslie Co.
Lewis Engrg. Co.
Liquidometer Corp.
Lucian Labs.
Machlett & Son
Magnetic Amplifiers Inc.
Manning, Maxwell & Moore
Marion Electcl. Instr.
Mason-Neilan Div.
Matisa Equipt. Co.
Maxson Corp.
Meriam Instr. Co.
Microloc Corp.
Midwestern Instruments
Minneapolis-Honeywell
Minneapolis-Honeywell, Boston Div.
Moeller Instr. Co.
Natl. Aircraft Corp.
Norden-Ketay
North Amer. Instr. Co.
Oster Mfg. Co., John
Pacific Labs.
Penn Indust. Instr. Corp.
Rahm Instruments
Raytheon Mfg. Co.
Reeves Instr. Div.
Refinery Supply
Republic Mfg. Co.
Revere Corp. of Amer.
Ribble Engrg. Co.
Rochester Mfg.
Seaboard Elec. Prod.
Sensitive Research Instr.
Serdex, Inc.
Servo Corp. of Amer.
Servomechanisms, Inc.
Servonic Instrs., Inc.
Sheffield Corp.
Simmonds Aerocessories
Simplex Valve & Meter
Simpson Electric
Slip Ring Co. of Amer.
Specialties, Inc.
Sperry Gyroscope
Standard Products Inc.
Starrett Co.
Streeter-Amet
Summers Gyroscope
Taller & Cooper
Task Corp.
Tejax Engrg. Corp.
Televiso Co.
Ten Bosch Inc.
Tenney Engrg. Co.
Texas Instrs., Inc.
Thermo-Elect. Co.
Topp Industries
Transval Engrg. Corp.
Trimount Instr. Co.
Triplett Electcl. Instr.
U. S. Gauge Div.
Vectron, Inc.
Victory Engrg.
WacLine, Inc.
Wakmann Watch Co.
Wallace & Tiernan
Wang Labs.
Warren-Knight
Waugh Labs.
West Coast Electronics
Westburg Mfg.
Westinghouse Electric
Weston Electcl. Instr.
Westport Electric
White Co., David
Whittaker Gyro Div.
Wiancko Engrg. Co.
Winslow Co.
Zernickow Co.

AIRCRAFT NAVIGATIONAL INSTRUMENTS, see Navigation Aids

AIRCRAFT POWER PLANT INSTRUMENTS

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Aero Research
Aerotech Specialties
Airborne Instruments Lab.
Airflo Instr. Co.
Associated Res., Inc.
Aviation Engrg. Co.
Avien, Inc.
Avion Div.
Avionic Products Engrg.
B & H Instr. Co.
Beck Bros.
Bendix, Eclipse-Pioneer
Bendix, Pioneer Central
Bogue Electric
Boston Auto Gage Co.
Bowser Inc.
Bristol Co.
Brooks Rotameter
Cambridge Instr. Co.
Colvin Labs., Inc.
Control Engrg. Corp.
Datran Electronics
DeJur-Amsco
Edison Inc., Thomas A.
Electro Prods. Labs.
Federal Telephone & Radio
GE Apparatus Sales
Gilmore Industries
Griswold Mfg.
Hasler-Tel Co.
Haydon Co., A. W.
Hays Corp.
Hewson Co.
Hickok Electcl. Instr.
Howell Instr. Co.
Instr. Assocs.
Jaeger Watch
Kistler Instr. Co.
Kollsman Instr.
Lewis Engrg. Co.
Liquidometer Corp.
Magnetic Research Corp.
Manning, Maxwell & Moore
Marion Electcl. Instr. Co.
Moisture Register Co.
Norden-Ketay
Penn Indust. Instr. Corp.
Phaostron Co.
Rahm Instruments
Ram Meter, Inc.
Revere Corp. of Amer.
Roller-Smith
Sel-Rex Corp.
Sensitive Res. Instr.
Servomechanisms, Inc.
Servonic Instr. Inc.
Sperry Gyroscope
Standard Products
Stewart-Warner
Thwing-Albert
Triplett Electcl. Instr.
Topp Industries
U. S. Gauge Div.
U. S. Taximeter
Varo Mfg. Co.
WacLine, Inc.
Waugh Engrg. Co.
Westburg Mfg.
Westinghouse Electric
Weston Electcl. Instr.
Winslow Co.

AIRPLANE CONTROLS, Movement Recorders

Aero Electronics
Airborne Instruments Lab.
Amer. Electronics
Arens Controls
Barber-Colman
Bendix, Eclipse-Pioneer
Breeze Corporations
Bristol Co.
Century Geophysical
Colvin Labs.
Consolidated Avionics
Cook Electric
Crescent Engrg. & Res. Co.
Dyna-Empire
Dynamics Res. Assoc.
Engrg. & Res. Corp.
Epsco, Inc.
Flight Research Engrg.
GE
Hamilton Watch
Hathaway Instr. Co.
Heiland Div.
Impact Register Co.
Kollsman Instr. Corp.
Lear Inc.
Magnetic Amplifiers Inc.
Manning, Maxwell & Moore
Marion Electcl. Instr. Co.
Minneapolis-Honeywell, Boston Div.
Norden-Ketay
North Amer. Instr. Co.
Pacific Scientific
PIC Design Corp.
Radiation, Inc.
Revere Corp.
Servonic Insts.
Sheffield Corp.
Sound App. Co.
Streeter-Amet
Summers Gyroscope
Task Corp.
Teleflex, Inc.
Thermix Corp.
United Control Corp.
U. S. Gauge Div.
Victory Engrg. Corp.
WacLine, Inc.
Westinghouse Air Brake Co.
Wiancko Engrg. Co.

AIRPORT INSTRUMENTS, see Aviation Instruments, Ground

AIRSPEED INDICATORS, see Aircraft Instruments

AIRSPEED INDICATOR TESTERS, see Aircraft Instruments

ALARM GAGES, see Pressure Gages with Alarms

ALARMS, Bearing Temperature, see Bearing Temperature Instruments

ALARMS, Bin Level, see Level Control, Bin

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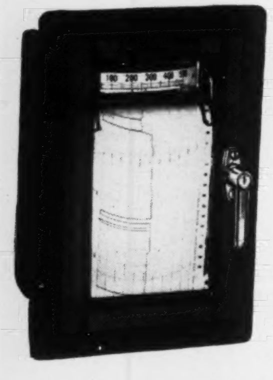

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ALKALIMETERS, see pH

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ALLOYS, Glass Sealing

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Amer. Silver Co.
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Crucible Steel
Division Lead
Driver Co., Wilbur B.
Driver-Harris Co.
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Ferner Co., R. Y.
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Mallory & Co., P. R.
Precision Tube Co.
Simonds Saw & Steel
Stupakoff Div.
Uhrig Co.
Universal-Cyclops
Westinghouse Electric
Wilson Co.

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Amer. Silver Co.
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Carpenter Steel Co.
Chatillon & Sons
Driver-Harris
Jessop Steel Co.
Magnetics, Inc.
Pyroferric Co.
Simonds Saw & Steel
Thomas & Skinner
Universal-Cyclops
Westinghouse Electric

ALLOYS, Special, Gold Spring

Alpha Metals, Inc.
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Amer. Silver Co.
Baker & Co.
Bishop & Co., J.
Brainin Co., C. S.
Chatillon & Sons
Cohn, Corp., Sigmund
Dow Chem.
General Plate Div.
Handy & Harman
Haynes Stellite
Ney Co.
Secon Metals Corp.
Sel-Rex Corp.
Sherman & Co.
Wilson Co.

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Arnold Engrg. Co.
Bridgeport Brass Co.
Chase Brass & Copper
Chatillon & Sons
Disston & Sons
Dow Chem.
Driver Co., Wilbur B.
Driver-Harris
Eaton Mfg. Co.
Elgin Nat'l Watch Co.
Ferner Co.
Hamilton Watch
Simonds Saw & Steel
Wall Colmonoy
Wheaton Co.
Wilson Co.

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Carpenter Steel Co.
Chatillon & Sons
Dow Chem.
Driver Co., Wilbur B.
Driver-Harris
Ferner Co.
General Plate Div.
Halcomb Steel
Jessop Steel
Mico Instr. Co.
Revere Copper & Brass
Simonds Saw & Steel
Stupakoff Div.
Universal-Cyclops
Wilson Co.

ALLOYS, Special, Magnesium

Dow Chem.
Federated Metals Div.
Hills-McCanna
North Amer. Philips

ALLOYS, Special, Nickel Silver

All-State Welding Alloys
Alpha Metals
Amer. Brass Co.
Amer. Silver Co.
Belmont Smelt. & Ref.
Deringer Metallurgical
Driver Co., Wilbur B.
Federated Metals Div.
Gallien, R. P.
Hamilton Watch
Hubbell Metals
International Nickel
Mallory & Co., P. R.
Precision Tube Co.
Revere Copper & Brass
Scovill Mfg.
Secon Metals Corp.
Sel-Rex Corp.
Sherman & Co.
Western Brass Mills
Wilson Co.

ALLOYS, Special, Silver Brazing

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All-State Welding Alloys
Alpha Metals
Amer. Platinum Works
Amer. Silver Co.
Baker & Co.
Belmont Smelt. & Ref.
Dixon, Inc.
Driver Co., Wilber B.
General Plate Div.
Handy & Harmon
Hubbell Metals
Mallory & Co., P. R.
Metals & Controls Corp.
Ney Co.
Sel-Rex Corp.
Wilson Co.

ALLOYS, Temperture Compensator

Alpha Metals, Inc.
Amer. Silver Co.
Carpenter Steel Co.
Chatillon & Sons
Driver Co., Wilbur B.
Driver-Harris
GE
Hamilton Watch
Jessop Steel
Simonds Saw & Steel
Wilson Co.

ALTIMETERS, see Barometers, Altitude

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ALUMINUM FRAMES for Small Moving Coils

A & M Tool & Die
Dittmore & Freimuth
Falstrom Co.
Precision Tube Co.
Rex Rheostat
Uniform Tubes

AMMETERS, A C and/or D C, Single or Multi-range, Indicating

Amer. Metrix Corp.
Assembly Products
Associated Res. Inc.
Ballantine Labs.
Barber-Colman
Beede Electcl. Instr. Co.
Bendix, Eclipse-Pioneer
Bradshaw Instruments
Bristol Co.
Burlington Instr. Co.
Burton-Rogers Co.
Cambridge Instr. Co.
Chicago Indust. Instr.
Columbia Elect. Mfg.
Dale Instruments
DeJur-Amsco
Dittmore & Freimuth
Electric Auto-Lite
Elect. Design & Mfg.
Electro Mechanical Div.
Electro-Mech. Instr.
Electro-Tech Equipt.
Electronic Devel. Labs.
Electronic Instr. Co.
Electronic Measmts Co.
Englehard Inc., Charles
Epic Inc.
Esterline-Angus
Ferranti Electric
Fielden Instr. Div.
Gar Electcl. Instr.
GE, Apparatus Sales
Greibach Instruments
Gulton Industries
Helipot Div.
Hickok Electcl. Instr.
Instrument Laboratories
Internatl. Instruments Inc.
J-B-T Insts.
Keithley Instrs., Inc.
Lewis Engrg. Co.
Magnetic Industries
Manning, Maxwell & Moore
Marion Elect. Instr. Co.
Meters, Inc.
Miller, M. C.
Newark Electric Co.
Niagara Electcl. Instr.
Norton Electcl. Instr.
Oltronix Co.
Pace Electcl. Instr.
Phaostron Co.
Physics Research Labs.
Pimex, Inc.
Precision App. Co.
Pyramid Instr. Co.
Q. V. S., Inc.
Radio City Products
Rawson Electcl. Instr.
Rochester Mfg.
Roller-Smith
Sendur Mfg.
Sensitive Res. Instr.
Shurite Meters
Simpson Electric
Sterling Mfg. Co.
Stewart-Warner
Sticht Co., Herman H.
Sun Electric
Texas Insts., Inc.
Triplett Electcl. Instr.
United Electric
United Optical
U. S. Gauge Div.
WacLine, Inc.
Waters Mfg.
Welch Mfg. Co., W. M.
West Instr. Corp.
Westinghouse Electric
Weston Electcl. Instr.
Wheelco Instr. Div.
Winslow Co.

AMMETERS, Clamp Type

Amer. Metrix Corp.
Bristol Co.
Columbia Electric
Dale Instruments
Electronic Development
Electro-Tech Equip.
Ferranti Electric
GE, Appartus Sales
H. D. Electric
Hickok Electcl. Instr.
Martindale Elecrtic
Pimex, Inc.
Pyramid Instr. Corp.
Rochester Mfg.
Schweitzer Mfg.
Sticht Co., Herman H.
Triplett Electcl. Instr.
United Optical
U. S. Gauge Div.
Weston Electcl. Instr.

AMMETERS, Contact-making

Assembly Products
Bristol Co.
Burlington Instruments
Dittmore & Freimuth
Electro-Tech Equip.
Esterline-Angus
Fielden Instr. Div.
GE, Apparatus Sales
Hickok Electcl. Instr.
Larson Instr. Co.
Lewis Engrg. Co.
Marion Electcl. Instr. Co.
Phaostron Co.
Rochester Mfg.
Roller-Smith
Sensitive Res. Instr.
Simpson Electric
Tipp-Tronic, Inc.
Triplett Electcl. Instr.
United Electric
West Instr. Corp.
Westinghouse Electric
Weston Electcl. Instr.

AMMETERS, Laboratory Standard

Amer. Metrix Corp.
Burlington Instr. Co.
Central Scientific
Electro-Tech Equip.
Fisher Scientific
GE, Apparatus Sales
Greibach Instruments
Gulton Industries
Hickok Electcl. Instr.
Marion Elect. Instr. Co.
Phaostron Co.
Physics Research Labs.
Radio Frequency Labs.
Rawson Electcl. Instr.
Roller-Smith
Sensitive Res. Instr.
Simpson Electric
Triplett Electcl. Instr.
United Optical
Welch Mfg. Co., W. M.
Westinghouse Electric
Weston Electcl. Instr.
Will Corp.

AMMETERS, Microammeters and Milliammeters

Amer. Metrix Corp.
Applied Physics
Assembly Products
Ballantine Labs.
Barber-Colman
Beckman Div.
Beede Electcl. Instr.
Beta Electric
Boone Instr.
Bradshaw Instruments
Bristol Co.
Burlington Instr. Co.
Burton-Rogers
Cambridge Instr. Co.
Chicago Indust. Instr. Co.
Clough-Brengle
Curtiss-Wright
Dale Instruments
DeJur-Amsco
Dittmore & Freimuth
Elect. Design & Mfg.
Electro-Mech. Instr.
Electronic Devel. Lab.
Electronic Instr. Co.
Electronic Measmts. Co.
Electro-Tech Equip.
Engelhard Inc., Chas.
Epic Inc.
Esterline-Angus
Fed. Telephone & Radio
Fielden Instr. Div.
Fisher Scientific
Gar Electcl. Instr.
GE, Apparatus Sales
Greibach Instruments
Gulton Industries
Hewson Co.
Hickok Electcl. Instr.

AMPLIFIERS, Audio Frequency

ACF Electronics
Acton Labs.
Aerovox Corp.
Aircraft Radio Corp.
Alcor Electronics Corp.
Allied Radio Corp.
Altec Lansing
Amer. Electronic Labs.
Amer. Helicopter Div.
Amplifier Corp. of Amer.
Atlantic Res. Corp.
Authorized Mfrs. Serv.
Autom. Corp. of Amer.
Avion Div.
Axler Associates
Baird-Atomic
Ballantine Labs.
Bell Aircraft Corp.
Berkshire Labs.
Berndt-Bach
Brit. Industries Corp.
Brush Electronics
Bunnell & Co.
Calidyne Co.
Canoga Corp.
Cedar Engrg. Co.
Centralab Div.
Computer Corp. of Amer.
Computer Engrg. Assocs.
ConRay Corp.
Consolidated Avionics
Control Corp. of Amer.
Davenport Mfg.
Daystrom Instr. Div.
Dukane Corp.
DuMont Labs., Allen B.
Dynamics Instrumentation
ElDorado Electronics
Electro Devices Inc.
Electro Mechanical Div.
Electro Voice, Inc.
Electronic Instr. Co.
Electronic Res. Assocs.
El Mec Labs.
Endevco Corp.
Engrg. Enterprises
Epsco, Inc.
Ercona Corp.
Erdco Engrg. Co.
Erwood, Inc.
Fed. Telephone & Radio
Femco, Inc.
Fisher Radio
Fisher Res. Lab.
Franklin Electronics
Freed Transf. Co.
Furst Electronics
Gates Radio Co.
General Radio Co.
Genzlinger, Inc.
Hammarlund Mfg. Co.
Hermetic Sealing Corp.
Hewlett-Packard
Hydro-Aire, Inc.
Indust. Test Equipt. Co.
Industronics
Instrument Devel. & Mfg.
Instrument Laboratories
Interelectronics Corp.
Johnson Co., E. F.
K-F Devel. Co.
Kaiser Aircraft & Elect.
Kay Electric
Keithley Instruments
Kinetic Insts.
Krohn-Hite
Lear, Inc.
LEL, Inc.
Ling Electronics, Inc.
L & O Res. & Devel. Co.
MB Mfg.
Magnavox Co.
Magnecord, Inc.
Magnetic Instr. Co.
Maurer Inc., J. A.
Munston Mfg. & Service
National Co.
Nelson Instr. Co.
Nems-Clarke
Newark Electric Co.
Peer, Inc.
Precision Electronics, Inc.
Precision Radiation Insts.
Radio City Products
Radio Frequency Labs.
Rauland-Borg
Remler Co.
Rheem Mfg.
Sanborn Co.
Scott, Inc., Hermon Hosmer
Sierra Electronic Corp.
Sonex, Inc.
Std. Electronic Res.
Taber Inst. Corp.
Tarc Electronics Inc.
Technical App. Builders
Technology Instr. Corp.
Telex, E-A Div.
Thermador Electcl. Mfg.
Thordarson-Meissner
Topp Industries
Transmag Div.
Transval Engrg. Corp.
Transvision, Inc.
Tri-Dex Electronics
Trio Labs., Inc.
Varo Mfg. Co.
Vectron, Inc.
Video Instrs.
Virginia Electronics
WacLine, Inc.
Walkirt Co.
Wallson Associates

Westinghouse Electric
Wallson Associates
Westronics, Inc.
Wickes Engrg. & Const.
Wheeler Insul. Wire, Inc.
Yellow Springs Instr.

AMPLIFIERS, Chopper

Airpax Products
Allegany Instr. Co.
Amer. Electronics Labs.
Askania Reg. Co.
Audio Instr. Co.
Avion Div.
Bell Aircraft Corp.
Berkeley Div.
Boonton Electronics
Bristol Co.
Brit. Electronic Sales
Brush Electronics
Davenport Mfg. Co.
Donner Scientific
Dukane Corp.
Edin Co.
El Mec Labs.
Electro Mechanical Div.
Electron. Spec. Co.
Engrg. Enterprises
Feedback Controls
Franklin Electronics
Hoover Electronics Co.
Indikon Co.
Industrial Control Co.
Jack Scient. Instr. Co., Bill
Kin Tel
Magnavox Co.
Magnetic Instr. Co.
Magnetic Research Corp.
Mid-Century Instrumatic
Minneapolis-Honeywell,
  Boston Div.
  Indus. Div.
Nelson Instr. Co.
Non-Linear Systems
Offner Electronics
Parsons Co.
Phoenix Prec. Instr.
Photron Instr. Co.
Reeves Instr. Corp.
Rheem Mfg.
Sanborn Co.
Servomechanisms, Inc.
Stoelting Co.
Systems Div., Beckman
Tech. Material Corp.
Transval Engrg. Corp
Trio Labs., Inc.
Video Instrs.
Industrial Control Co.
Internat. Instr. Co.
J-B-T Insts.
Keithley Instruments
Kin Tel
Leeds & Northrup
Lewis Engrg. Co.
MacDonald Co. W. S.
Magnetic Industries
Manning, Maxwell & Moore
Marion Elect. Instr. Co
Meters, Inc.
Mil Instr. Corp.
Miller, M. C.
Millivac Instr. Co.
Minneapolis-Honeywell,
  Boston Div.
Newark Electric Co.
Norton Electcl. Instr.
Oltronix Co.
Pace Electcl. Instr.
Pfaltz & Bauer
Phaostron Co.
Physics Res. Labs.
Pimex, Inc.
Precision App. Co.
Pyramid Instr. Co
G. V. S. Inc.
Radio City Products
RCA Tube
Rawson Electcl. Instr.
Reiner Electronics
Roller-Smith
Scient. Inst. Dev. Lab.
Scientific Specialties
Sensitive Res. Instr.
Shallcross Mfg.
Shelby Instr. Co
Shurite Meters
Simpson Electric
Std. Science Supp.
Sun Electric
Supreme, Inc.
Technology Instr. Div.
Texas Insts., Inc.
Thwing-Albert
Tipp-Tronic, Inc.
Triplett Electcl. Instr.
Triumph Mfg.
United Electric
United Optical
WacLine, Inc.
Wallace & Tiernan
Waters Mfg.
Welch Mfg. Co., W. M.
West Instr. Corp.
Westinghouse Electric
Weston Electcl. Instr.
Winslow Co.

AMMETERS, Recording

Amer. Mach. & Foundry
Autocall Co.
Barber-Colman
Bristol Co.
Brush Electronics
Cambridge Instr. Co.
Dittmore & Freimuth
Edin Electronic
Electro-Tech Equip.
Engelhard Inc., Chas.
Engrg. Enterprises
Esterline-Angus
Fed. Telephone & Radio
Fielden Instr. Div.
GE, Apparatus Sales
HD Electric
Larson Instr. Co.
Leeds & Northrup
Manning, Maxwell & Moore
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Oltronix Co.
Physics Res. Labs.
Precise Measmts. Co.
Roller-Smith
Sanborn Co.
Sangamo Electric
Sound Apparatus
Taller & Cooper
Texas Insts., Inc.
Wallace & Tiernan
Westinghouse Electric
Weston Electcl. Instr.
Wheelco Instr. Div.

AMMETERS, Split Core

Acton Labs., Inc.
Bristol Co.
Columbia Elect. Mfg.
Dale Instruments
Electro-Tech Equip.
Ferranti Electric
GE, Apparatus Sales
HD Electric
Norton Electcl. Instr.
Physics Res. Labs.
Pyramid Instr. Corp.
Roller-Smith
Rubicon Co.
Sticht Co., Herman H.
Triplett Electcl. Instr.
Waters Mfg. Inc.
Weston Electcl. Instr. Corp.

AMMETERS, Thermo, including Milliammeters

Assembly Products
Beede Electcl. Instr.
Bristol Co.
Burlington Instr. Co.
Cambridge Instr. Co.
Chicago Indust. Insts.
Dale Instruments
DeJur-Amsco
Dittmore & Freimuth
Electronic Devel. Lab.
Electro-Tech Equip.
GE, Apparatus Sales
Greibach Instruments
Gulton Industries
Hickok Electcl. Instr.
Lewis Engrg. Co.
Magnetic Industries, Inc.
Marion Electrical Instr.
Meters, Inc.
Physics Res. Labs.
Pyrometer Instr. Co.
Q. V. S., Inc.
Rawson Electcl. Instr.
Roller-Smith
Sangamo Electric
Sendur Mfg.
Sensitive Res. Instr.
Shelby Instr. Co.
Simpson Electric
Sun Electric
Texas Instrs., Inc.
Triplett Electcl. Instr.
WacLine, Inc.
Welch Mfg. Co., W. M.
West Instr. Corp.
Westinghouse Electric
Weston Electcl. Instr.

AMMONIA ANALYZERS, see Gas Analyzers

AMMONIA CONTROL EQUIPMENT

Askania Reg. Co.
Autoclave Engrs.
B-I-F Industries
Bailey Meter Co.
Bastian-Blessing
Bristol Co.
Builders-Providence
Cash Valve Mfg. Corp.
Dahl & Co., G. W.
Everson Mfg. Co.
Fischer & Porter Co.
Foster Engrg. Co.
Frick Co.
General Controls
Hammel-Dahl
Hoke, Inc.
Jo-Bell Products
Jordan Reg. Corp.
Lear Inc.
Lumenite Electronic
Magnetrol, Inc.
Marsh Corp., Jas. P.
McAlear Mfg.
Mercoid Corp.
Natural Gas Equipt., Inc.
Nelson Electric Mfg.
Phila. Thermometer Co.
Proportioneers, Inc.
R. K. L. Valve & Mfg.
Research Controls
Roy Co., Milton
Scientific Instr. Co.
Schutte & Koerting
Shallcross Controls
Star-Martin Gage Co.
Taylor Instr. Cos.
Taylor & Co., W. A.
Thermco Labs.
Wallace & Tiernan
Waukee Engrg. Co.
Weston Electcl. Instr.

AMPEREHOUR METERS

Assoc. Research Inc.
GE, Apparatus Sales
Hetherington & Berner
Landis & Gyr
Spivey, Inc., James S.
Sangamo Electric
Texas Insts., Inc.
Westinghouse Electric

AMPLIFIERS, Commercial Frequency

Aero Electronics
Airdesign, Inc.
Amer. Electroneering
Amer. Machine & Foundry
Amplifier Corp. of Amer.
Assembly Products
Avion Div.
Ballantine Labs., Inc.
Bell Sound Systems
Bendix Aviation Corp.
Berkshire Labs.
Blonder-Tongue Labs.
Bogue Electric Mfg.
Brit. Electronic Sales
Cal-Tronics Corp.
Commercial Research Div.
Dukane Corp.
Dynamics Instrumentation
Edin Co., Inc.
El Mec Labs.
Electro Voice, Inc.
Electronic & Engrg. Serv.
Engr. Res. & Devel.
Erwood, Inc.
F. R. Machine Works
Feiler Engrg. Co.
Femco, Inc.
Fluke Mfg.
Freed Transf. Co.
Furst Electronics
GE
General Mills Inc.
General Radio
Geotechnical Corp.
Hathaway Instr. Co.
Indikon Co.
Industrial Electronics
Industrial Test Equipt.
Interelectronics Corp.
Kahn & Co.
Kaiser Aircraft & Elect.
Kaye Devel. Co.
Keithley Instruments
Krohn-Hite
Langevin Mfg.
MacLeod & Hanopol
Magnetic Amplifiers Inc.
Magnetic Instr. Co.
Martin-Hubbard
McFarlin Co.
Michigan Electronics
Millen Mfg.
Minneapolis-Honeywell,
  Indust. Div.
National Co.
New London Instr. Co.
Radio Receptor Co.
RCA Div.
Raytheon Mfg.
Rheem Mfg.
Reeves Instr. Div.
Reiner Electronics
Remler Co.
Rockwell Engrg. Co.
Rowe Engrg. Co.
Sanborn Co.
Scott Inc., Hermon Hosmer
Servomechanisms, Inc.
Sherron Metallic Corp.
Southw. Ind. Electronics
Tektronix, Inc.
Televiso Co.
Thordarson-Meissner
Transval Engrg. Corp.
Transvision, Inc.
Vectron, Inc.
WacLine, Inc.
Waterman Products
Wheeler Insul. Wire
Wilmar Mfg.

AMPLIFIERS, DC

ACF Electronics
Acton Labs.
Advance Electronics
Aero Electronics
AiResearch Mfg.
Airpax Products
Allegany Instr. Co.
Allied Products Div.
Allied Radio
All-Tronics
Amer. Electroneering
Amer. Electronic Labs.
Amer. Mach. & Foundry
Amplifier Corp. of Amer.
Antenna Research Lab.
Applied Physics Corp.
Arnoux Corp.
Atlas Engrg. Co.
Audio Instr. Co.
Avion Div.
Baird-Atomic
Bell Aircraft Corp.
Belock Instr.
Bendix, Pacific Div.
Berkeley Div.
Berkshire Labs.
Bogue Electric Mfg.
Bristol Co.
Brit. Electronic Sales
Bruno-N. Y. Indust.
Brush Electronics
Cal-Tronics Corp.
Calidyne Co.
Century Geophysical
Cinema Engrg. Co.
Clevite-Brush
Collins Radio
Computer Co. of Amer.
Computer Engrg. Assocs.
Concord Radio
Consol. Electrodynamics
Davenport Mfg.
Daystrom Instr. Div.
Devtronics, Inc.
Diatron Co.
Dittmore & Freimuth
Donner Scientific
Dressen-Barnes
Dukane Corp.
DuMont Labs., Allen B.
Dynamics Res. Assoc.
Eastern Prec. Resistor
Edin Co.
El Mec Labs.
Electro Mechanical Div.
Electro-Mechanical Res.
Electro-Medical Lab.
Electronic Assocs.
Electronic Controls, Inc.
Electronic Engrg. Assocs.
Electronic & Engrg. Serv.
Electronic Measmts. Co.
Electronic Prods. Co.
Electronic Res. Assocs.
Electronic Tube Corp.
Ellis Associates
El-Tronics, Inc.
Engineered Electronics
Engineering Res. & Devel.
Engrg. Enterprises
Epsco, Inc.
Erie Resistor
Erwood, Inc.
Farrand Optical
Federal Telephone & Radio
Feedback Controls
Feiler Engrg. Co.
Femco, Inc.
Fielden Instr. Div.
Ford Instr. Co.
Franklin Electronics
Furst Electronics, Inc.
GE
General Radio
Geotechnical Corp.
Goodyear Aircraft
Gulton Industries
Hagan Chem. & Controls
Hallamore Electronics
Hall Scott
Hathaway Instr. Co.
Hoover Electronics
Heiland Div.
Hycon Electronics
Indikon Co.
Indust. Test Equipt. Co.
Industrial Control Co.
Instrument Labs.
Jack Scient. Instr. Co., Bill
James Vibrapowr Co.
Jarco Services
Jarrell-Ash
Kahn & Co.
Kaiser Aircraft & Elect.
Kaye Devel. Co.
Keithley Instruments
Keystone Products
Kin Tel
Langevin Mfg. Corp.
Lear, Inc.
Leeds & Northrup
Lewyt Metal Prods.
Librascope Inc.
Link Aviation Inc.
Liston-Folb
MacLeod & Hanopol
Magnavox Co.
Magnetic Amplifiers Inc.
Magnetic Instr. Co.
Magnetic Res. Corp.
Mag Elect. Prods.
Manning, Maxwell & Moore
Maxson Instr. Div.
McFarlin Co.
Michigan Electronics
Mid-Century Instrumatic
Midwestern Instruments
Millen Mfg. Co.
Millivac Instruments
Minneapolis-Honeywell
  Boston Div.
Minnesota Electronics
Nalley Co.
Neff Instrument
Nelson Instr. Co.
Non-Linear Systems
Norden-Ketay
Offner Electronics
Ohmart Corp.
Oltronix Co.
Olympic Devel. Co.
Parsons Co.
Perkin-Elmer
Philbrick Researches
Phoenix Prec. Instr.
Photocon Research
Photron Instr. Co.
Photovolt Corp.
Polytechnic Res. & Devel.
Process & Instruments
Radiation Counter Labs.
RCA Div.
Raytheon Mfg.
Reeves Instr. Corp.
Reiner Electronics
Remler Co.
Rheem Mfg.
Richardson-Allen
Rockwell Engrg. Co.
Rowe Engrg. Co.
Sanborn Co.
Servo Corp. of Amer.
Servomechanisms, Inc.
Servo-Tek Products
Shepard Labs.
Southw. Ind. Electronics
Special Instruments Lab.
Spencer-Kennedy
Spivey, Inc., James S.
Std. Electronic Res.
Stoelting Co.
Systems Div., Beckman
Taber Inst. Corp.
Technical App. Builders
Technology Instr. Corp.
Tektronix, Inc.
Texas Instrs., Ind. Div.
Thordarson-Meissner
Topp Industries
Transval Engrg. Corp.
Trio Labs., Inc.
Underwood Corp.
United Control Corp.
Universal Transistor
Vectron, Inc.
Video Instrs.
Virginia Electronics
WacLine, Inc.
Wallson Associates
Western Radiation Lab.
Weston Electcl. Instr.
Wiancko Engrg. Co.

AMPLIFIERS, Electrometer

Amer. Tradair Corp.
Applied Physics
BJ Electronics
Beckman Div.
Berkshire Labs.
Bristol Co.
Consol. Electrodynamics
Curtiss-Wright
General Radio Co.
Industrial Control Co.
Keithley Instruments
Kistler Instr. Co.
MacLeod & Hanopol
Mid-Century Instrumatic
Ohmart Corp.
Transval. Engrg. Corp.

AMPLIFIERS, Logarithmic

Audio Instr. Co.
Avion Div.
Axler Associates
BJ Electronics
Baird-Atomic, Inc.
Brush Electronics
Calif. Tech. Indust.
Curtiss-Wright
Daystrom Instr. Co.
Daystrom Nuclear Div.
Deltron, Inc.
Donner Scientific
Electronic Assocs.
Furst Electronics
Interelectronics Corp.
Keithley Instrs., Inc.
LEL, Inc.
Magnetic Instr. Co.
Mid-Century Instrumatic
Moseley Co., F. L.
Parsons Co.
Phoenix Prec. Instr.
Reeves Instr. Corp.
Sanborn Co.
Tarc Electronics Inc.
Universal Transistor

AMPLIFIERS, Magnetic, including Saturable Reactors

Adler Electronics
Aerovox Corp.
AiResearch Mfg.
Airpax Prods.
Allied Engrg. Div.
All-Tronics, Inc.
Amer. Electronics
Amer. Mach. & Foundry
Arnold Magnetics Co.
Arnoux Corp.
Atlas Engrg. Co.
Avion Div.
Basler Electric
Bendix, Pacific
Berkeley Div.
Berndt-Bach
Bogue Electric
Bone Engrg. Corp.
Brit. Electronic Sales
Burroughs Electronics
Butler Mfg.
CGS Labs., Inc.
Calif. Magnetic Cont. Corp.
Carad Corp.
Chicago Std. Transf. Corp.
Clark Controller Co.
Clevite-Brush
Communication Access. Co.
Control Components Co.
Control Panel Corp.
Daystrom Instr. Div.
Daystrom Nuclear Div.
Dormeyer Industries
D & R Limited
Dressen-Barnes
Dukane Corp.
Dynamics Res. Assoc.
Engineered Magnetics
Federal Telephone & Radio
Feedback Controls
Ford Instr. Co.
Freed Transf. Co.
GE, Apparatus Sales
General Ceramics
General Instrument Co.
General Magnetics
Genl. Prec. Lab.
Goslin Electric & Mfg.
Gramer-Halldorson
Gudeman Co.
Gulton Industries
Hanson-Gorrill-Brian
Helipot Div.
Hevi-Duty Elect. Co.
Hycor Div.
Industrial Control Co.
Jack Scient. Instr. Co., Bill
Jeffries Transformer
Kaiser Aircraft & Elect.
Kearfott Co.
Keystone Products
Kollsman Inst.
Lear, Inc.
Librascope, Inc.
Litton Ind. of Md.
Magnavox Co.
Magnetic Amplifiers Inc.
Magnetic Controls
Magnetic Industries, Inc.
Magnetic Instr. Co.
Magnetic Res. Corp.
Magnetics, Inc.
Maxson Instr. Div.
Mercury Electronic
Minneapolis-Honeywell,
  Boston Div.
Molded Insulation
Natl. Aircraft Corp.
Norden-Ketay
NYT Electronics, Inc.
Osborne Electric Co.
Peerless Div., Altec
Perkin Engrg. Co.
Polytechnic Res. & Devel.
Potter Instr. Co.
Pulse Engrg., Inc.
Ramo-Wooldridge
Raytheon Mfg. Co.
Reeves Instr. Corp.
Rheem Mfg. Co.
Sangamo Electric
Servonics, Inc.
Shepard Labs.
Sorenson & Co.
Southw. Ind. Electronics
Specialties Inc.
Sprague Engrg. Corp.
Standard Electrical Prods.
Std. Electronic Res. Corp.
Sterling Transf. Corp.
Summers Gyroscope
Technical App. Builders
Telemeter Magnetics, Inc.
Thermador Electcl. Mfg.
Thompson Products
Thordarson-Meissner
Timely Insts. & Conts. Co.
Topp Industries
Torwico Electronics, Inc.
Transformers, Inc.
Transmag Div.
Transval Engrg. Corp.
Triad Transf. Corp.
United Control Corp.
United Transformer Corp.
Varo Mfg. Co.
Vari-L Company, Inc.
Vickers Electric Div.
WacLine, Inc.
Walkirt Co.
Wallson Associates
Westinghouse Electric
Wheeler Insul. Wire

AMPLIFIERS, Miscellaneous, including Geophysical, Nucleonic, Strain-gage Oscillograph, etc.

ACF Electronics
A-V Mfg. Corp.
Acton Labs.
Advanced Electronics Inc.
Aero Electronics
Aerovox Corp.
Allegany Instr. Co.
Allied Engrg. Div.
Allied Products Div.
All-Tronics, Inc.
Amer. Electroneering
Amer. Electronic Labs.
Amer. Tradair Corp.
Anton Electronics Labs.
Atlantic Research Corp.
BJ Electronics
Baird-Atomic
Baldwin-Lima Hamilton
Ballantine Labs.
Basic Controls, Inc.
Berkeley Div.
Berkshire Labs.
Brit. Electronic Sales
Browne & Sharpe
Brush Electronics
Calidyne Co.
Century Electronics
Century Geophysical
Chesapeake Instr. Corp.
Cleveland Instrument
Clevite-Brush
Consol. Electrodynamics
Control Components Co.
Cook Electric
Corson Electric Mfg.
Crescent Engrg. & Res. Co.
Curtiss-Wright
Daystrom Nuclear Div.
Daytronic Corp.
Detectolab, Inc.
Diatron Co.
Dukane Corp.
DuMont Labs., Allen B.
Dynamics Res. Assoc.
Eastern Prec. Resistors
Edin Co.
El Dorado Electronics
Electro-Pulse, Inc.
Electronic & Engrg. Serv.
Electronic Measurements
Electronic Res. Assocs.
Electronic Tube Corp.
Electronics Devel. Lab.
Ellis Associates
Endevco Corp.
Engineered Electronics
Epsco, Inc.
Farnsworth Electronics
Fairbanks, Morse & Co.
Feedback Controls
Fisher Research Lab.
Forro Scientific
Franklin Electronics
Furst Electronics
GE, Apparatus Sales
Gates Radio Co.
Geotechnical Corp.
Gilmore Industries
Gyroscopes, Inc.
Hamner Electronics
Hathaway Instr. Co.
Heiland Div.
Hewlett-Packard
I-L-S Instr. Corp.
Indikon Co.
Industrial Control
Industrial Electronics
Indust. Test Equipt. Co.
Insco Company
Instrument Labs
Instrumentation Assoc.
Insts. for Industries, Inc.
Interelectronics Corp.
Internat. Research & Dev.
Kahn & Co.
Keithley Instrs., Inc.
Kin Tel
Krohn-Hite
LEL, Inc.
Mag Elect. Prods.
Magnavox Co.
Magnecord, Inc.
Magnetic Amplifiers
Magnetic Instr. Co.
Magnetic Research Corp.
Maxson Instr. Div.
Midwestern Instruments
Millen Mfg. Co.
Minneapolis-Honeywell,
  Boston Div.
Natl. Aircraft Corp.
Natl. Radiac, Inc
Nems-Clarke

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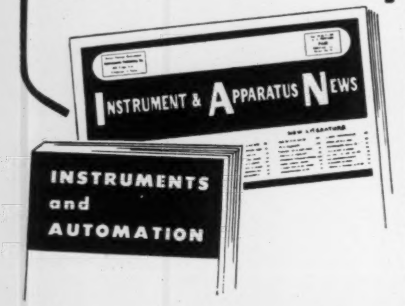

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2 At lowest cost (9.00) per page per M (12-time):

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INSTRUMENTS
PUBLISHING COMPANY
845 RIDGE AVE., PITTSBURGH 12

Non-Linear Systems
Nuclear Corp. of Amer.
Nucleonic Co. of Amer.
Offner Electronics
Oltronix Co.
Peschel Electronics, Inc.
Phoenix Prec. Instr.
Photron Instr. Co.
Polarad Electronics
Polytechnic Res. & Devel.
Process & Instruments
R. S. Electronics
Radiation, Inc.
Radiation Instr. Dev. Lab.
Remler Co.
Rheem Mfg. Co., Elect.
Sanborn Co.
Seismograph Service Corp.
Southw. Indust. Electronics
Spencer-Kennedy
Spivey, Inc., James S.
Std. Electronic Res.
Systems Div., Beckman
Swedish Gage
Taber Inst. Corp.
Tektronix, Inc.
Texas Div., Brush
Texas Insts., Inc.
Texas Instrs., Ind. Div.
Thermador Electl. Mfg.
Thordarson-Meissner
Thwing-Albert
Timely Insts. & Consts. Co.
Transval Engrg. Corp.
Ultradyne Engrg. Labs.
United Controls
Universal Transistor
Victoreen Instr. Co.
Video Instrs.
Virginia Electronics
Wakefield Industries
Western Radiation Lab.
White Instr. Labs.

AMPLIFIERS, Radio Frequency

ACF Electronics
Adler Electronics
Airborne Instruments Lab.
Allied Engrg. Div.
Amerac, Inc.
Amer. Electroneering
Amer. Electronic Labs.
Amer. Mach. & Foundry
Audio Devel. Co.
BJ Electronics
Bell Aircraft Corp.
Bendix-Pacific
Berkeley Div.
Blonder-Tongue Labs.
Boonton Radio
Browning Labs.
Bruno-N. Y. Indust.
Brush Electronics
Bunnell & Co.
Cal-Tronics Corp.
Canoga Corp.
Centralab Div.
C.G.S. Labs.
Clarke Instr. Corp.
Clegg Labs, Inc.
Collins Radio
Computer Co. of Amer.
D & R Limited
Devtronics Inc.
Diatron Co.
Dittmore & Freimuth
Dukane Corp.
DuMont Labs., Allen B.
Electrical & Phys. Instr.
Electro Mechanical Div.
Electro Mech. Research, Inc.
Electronic Communication
Electro Voice, Inc.
Electronic & Engrg. Serv.
Electronic Tube Corp.
El-Tronics Inc.
Engineering Res. & Devel.
Erdco Engrg.
Farnsworth Electronics
Feiler Engrg. Co.
Femco, Inc.
Ferris Instr. Corp.
F. R. Machine Works
GE, Apparatus Sales
Gates Radio Co.
General Magnetics
General Radio
Georator Corp.
Geotechnical Corp.
Goodyear Aircraft
Heiland Div.
Hewlett-Packard
Hycon Mfg. Co.
Hydro-Aire Inc.
Inst. Corp. of Fla.
Insts. for Industries, Inc.
International Telemeter
Jerrold Electronics
Johnson Co., E. F.
K-F Devel. Co.
Kaiser Aircraft & Elect.
Kahn & Co.
Kay Electric
Kaye Devel. Co.
Kearfott Co.
Lear, Inc.
LEL, Inc.
Ling Electronics
L & O Res. & Devel.
Magnavox Co.
Magnetic Instr. Co.
Mag Elect. Prods.
McFarlin Co.
Maxson Instr. Div.
McKenna Labs.
Measurements Corp.
Millen Mfg. Co.
Millivac Instruments
Mohawk Electronic
Munston Mfg. & Service
National Co.
Natl. Aircraft Corp.
Nems-Clarke
New London Instr. Co.
Norden-Ketay
Panoramic Radio Prods.
Photocircuits Corp.
Polarad Electronics
Polyphase Instr.
Polytechnic Res. & Dev.
R. S. Electronics Corp.
Radiation, Inc.
Radio City Products
Radio Receptor Co.
Ramo-Wooldridge
Raytheon Mfg.
RCA Div.
Reeves Instr. Div.
Reiner Electronics
Remler Company
Rheem Mfg. Co.
Rowe Engrg. Co.
Sargent-Rayment
Servo. Corp. of Amer.
Sherron Metallic Corp.
Sierra Electronic Corp.
Spencer-Kennedy
Sperry Gyroscope
Spivey, Inc., James S.
Stavid Engrg. Inc.
Std. Electronic Res.
Tarc Electronics Inc.
Tech. Material Corp.
Technology Instr. Corp.
Tektronix, Inc.
Tele-Dynamics Inc.
Telechrome, Inc.
Tel-Instr. Elects. Corp.
Thordarson-Meissner
Transval Engrg. Corp.
Transvision, Inc.
Triumph Mfg.
U. S. Electronics
Varian Assocs.
Vectron, Inc.
Virginia Electronics
Walkirt Co.
Waterman Products
Weinschel Engrg. Co.
West Coast Electronics
Wickes Engrg. & Const.
Wilmar Mfg

AMPLIFIERS, Servo

A-V Mfg. Corp.
Adler Electronics
Aero Elx. (Chicago)
Airpax Products
All-Tronics, Inc.
Amer. Electronic Labs.
Amer. Mach. & Foundry
Analogue Controls
Arma Div.
Askania Reg. Co.
Atchley, Inc., Raymond
Autonetics Div.
Autron Engrg., Inc.
Avion Div.
Bell Aircraft Corp.
Belock Instr.
Bendix Aviation Corp.
Berkeley Div.
Bogue Electric Mfg.
Bristol Co.
Brit. Electronic Sales
Brush Electronics
Burton Mfg. Co.
Calidyne Co.
Calif. Magnetic Cont. Corp.
Canoga Corp.
Cedar Engrg., Inc.
Communication Access. Co.
Consolidated Avionics
Control Components Co.
Control Specialists, Inc.
Cook Electric
Datran Electronics
Daystrom Instr. Div.
Donner Scientific
Dukane Corp.
Dynamics Res. Assoc.
Electro-Mech. Div.
Electronic Assoc.
Electron Spec. Co.
Engineered Magnetics
Engrg. Enterprises
Engrg. & Res. Corp.
Erdco Engrg.
Farnsworth Electronics
Farrand Optical
Feedback Controls
Franklin Electronics
Freed Transf. Co.
GE, Apparatus Sales
General Magnetics
Goodyear Aircraft
Gyroscopes, Inc.
Hagan Chem. & Controls
Helipot Div.
Heller Co., Gerald
Henschel Corp.
Hycon Electronics
I-L-S Instr. Corp.
Indikon Co.
Industrial Control Co.
Industrial Electronics
Inst. Corp. of Fla.
Jack Scient. Instr. Co., Bill
Kaiser Aircraft & Elect.
Kearfott Co.
Keystone Products
Kollsman Inst.
L & O Res. & Devel. Co.
Lear, Inc.
Librascope, Inc.
Ling Electronics
Link Aviation
Litton Ind. of Md.
Magnavox Co.
Magnetic Amplifiers Inc.
Magnetic Controls
Magnetic Industries, Inc.
Magnetic Instr. Co.
Magnetic Res. Corp.
Manning, Maxwell & Moore
Maxson Instr. Div.
Mid-Century Instrumatic
Minneapolis-Honeywell
Indust. Div.
Minneapolis-Honeywell, Boston Div.
Muirhead Instrument
Nader Mfg.
Narda Corp.
National Co.
Natl. Aircraft Corp.
Nelson Intsr. Co.
Norden-Ketay
Oster Mfg.
Pegasus Labs.
Peschel Electronics, Inc.
Phoenix Prec. Instr.
Radiation Inc.
Ramo-Wooldridge
Reeves Instr. Corp.
Rheem Mfg. Co.
Rockwell Engrg. Co.
Sanborn Co.
Sanders Associates
Schaevitz Engineering
Scott, Inc., Hermon H.
Servo-Tek Prods.
Servomechanisms, Inc.
Servonics, Inc.
Servo Corp. of Amer.
Shepard Labs.
Simmons Aerocessories
Std. Electronic Res.
Stavid Engrg. Inc.
Sterling Prec., Inst. Div.
Stoelting Co.
Suffolk Products
Tarc Electronics
Texas Insts., Inc.
Thompson Products
Timely Insts. & Consts. Co.
Torwico Elects., Inc.
Transicoil Corp.
Transmag Div.
Transval Engrg. Corp.
Trio Labs., Inc.
United Control Corp.
Universal Transistor
Vectrol Engrg., Inc.
Vickers Electric Div.
WacLine, Inc.
Walkirt Co.
Wallson Associates

AMPLIFIERS, Vibration, see Vibration Instruments

AMPLIFIERS, Wideband

ACF Electronics
A.R.F. Products
Acton Labs.
Adler Electronics
Advance Electronics
Airborne Instruments Lab.
Alfred Electronics
Allied Engrg. Div.
Amer. Electronic Labs.
Amer. Mach. & Foundry
Arenberg Ultrasonic Lab.
Atlantic Research Corp.
Avion Div.
BJ Electronics
Bendix Aviation Corp.
Berkeley Div.
Beva Laboratory
C.G.S. Labs.
Caltronics Corp.
Canoga Corp.
Computer Engrg. Assoc.
Deltron, Inc.
Diatron Co.
Donner Scientific
Dukane Corp.
DuMont Labs., Allen B.
Electro-Mech. Research
Electro Products Labs.
Electronic & Engrg. Serv.
Electronic Instr. Co.
Electronic Res. Assoc.
Electro-Pulse Inc.
Electro Voice Inc.
El-Tronics Inc.
Endevco Corp.
Engrg. Research & Devel.
Epsco Inc.
F. R. Machine Works
Federal Telephone & Radio
Feiler Engrg. Co.
Furst Electronics
General Radio
Hamner Electronics
Harrison Labs.
Hathaway Instr. Co.
Hewlett-Packard
Indust. Test Equipt. Co.
Inct. Corp. of Fla.
Insts. for Industries, Inc.
Interelectronics Corp.
Internat. Telemeter Corp.
Jerrold Electronics
Kahn & Co.
Kay Electric
Kaye Devel. Co.
Kearfott (Western)
Keithley Instrs.
Kin Tel
LEL, Inc.
MB Mfg. Co.
Mag. Elect. Products
Magnetic Instr. Co.
Marconi Instruments
Maxson Instr. Div.
Mid-Century Instrumatic
Millivac Instr. Co.
Mico Instr. Co.
North Amer. Instr.
Revere Corp.
Spence Engrg. Co.
Std. Science Supply
Stewart, M. C.
Taylor Instr. Cos.
Thermometer Corp.
Wallace & Tiernan
Waugh Engrg. Co.
Westburg Mfg.
Willson Products

ANALYTICAL INSTRUMENTS (see also Chromatography, also Defractometers, also Electroanalysis, also Electrophoresis, also Interferometers, also Oxidation-Reduction, also Spectrometers, also Titrometers, etc.)

Aero Electronics
Allied Engrg. Div.
Amer. Balance
Amer. Electronics
Amer. Instr. Co.
Amer. Tradair Corp.
Apex Scient.
Applied Physics Corp.
Applied Research Labs.
Avion Div.
Axler Associates
BJ Electronics
B & K Mfg.
Bacharach Industrial Instr.
Bausch & Lomb
Beckman Div.
Beckman, Inc., Arnold O.
Beckman Instrs.
Bendix-Friez
Beva Laboratory
Boonton Radio
Bristol Co.
Bush Assocs.
Cambridge Instr. Co.
Carroll Co.
Central Scientific
Coleman Electric
Coleman Instr.
Consol. Electrodynamics
Davenport Mfg.
Davis Instr. Co.
Dietert Co.
Dorber Co.
Edin Electronics
Epsco, Inc.
Ercona Corp.
Esterline-Angus
Farnsworth Electronics
Fielden Instr. Div.
Fisher Research Lab.
Fisher Scientific
Foxboro Co.
Fuess, Inc.
GE, Apparatus Sales
GE, X-Ray Corp.
General Electronic
Goodyear Aircraft
Gow-Mac Instr. Co.
Hallkainen Instruments
Hogan Labs.
Hycon Mfg.
Industrial Control Co.
Industrial Insts. Inc.
Insco Co.
Instrument Devel. Labs.
Instrument Engrg. Serv.
International Instr. Co.
Internat. Res. & Dev.
Jarco Services
Jarrell-Ash
Kay Electric Co.
Kaye Devel. Co.
Laboratory Equipt. Corp.
Leeds & Northrup
Lucian Labs.
Macbeth Corp.
Machlett & Son
Menlo Research Lab.
Mine Safety Appliances
Nankervis Co.
Natl. Spectrographic Sales
North Amer. Philips
Nuclear Research
Ohmart Corp.
Patwin Instruments Div.
Perkin-Elmer
Phoenix Prec. Instr.
Podbielniak, Inc.
Precise Measmts. Co.
Precision Scientific
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Q O S Corp.
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Schlumberger Well
Scientific Glass App.
Sensitive Res. Instr.
Servo Corp. of Amer.
Taller & Cooper
Testing Machines, Inc.
Thermco Labs.
U. S. Testing Co.
Varian Associates
WacLine, Inc.
Weston Electcl. Instr.

ANALYZERS, Chemical Composition, see Analytical Instruments

ANALYZERS, Circuit Breaker, see Circuit Breaker Analyzers

ANALYZERS, Electric Wave, see Spectrum Analyzers

ANALYZERS, Electronic Circuit, see Circuit Testers

ANALYZERS, Flight, see Navigation Aids

ANALYZERS, Gas, see Gas Analyzers

ANALYZERS, Ignition System, see Engine Test Instruments

ANALYZERS, Industrial Circuit, see Circuit Analyzers, Industrial

ANALYZERS, Industrial Power, see Electric Power

ANALYZERS, Infrared, see Analytical Instruments, also Spectrometers

ANALYZERS, Nitric Oxide, see Gas Analyzers

ANALYZERS, Oxygen, see Gas Analyzers

ANALYZERS, Radio Set, see Circuit Testers

ANALYZERS, Sound, see Sound

ANALYZERS, Spectrum see Spectrum Analyzers

ANEMOMETERS, Hot-wire

Aero Research Instr. Co.
Airflo Instr. Co.
Atlantic Research Corp.
Bendix-Friez
Bristol Engrg. Corp.
Flow Corp.
Hastings-Raydist
Hill & Co.
Gilmore Industries
Illinois Testing Labs.
Instruments Corp.
SCAM Instr. Corp.
Serdex, Inc.
Victory Engrg. Corp.
Willson Products

ANEMOMETERS, Mechanical

Alina Corp.
Amer. Instr. Co.
Bacharach Industrial Instr.
Beckman & Whitley
Bendix, Eclipse-Pioneer
Bendix-Friez
Dietzgen Co.,
Dwyer Mfg., F. W.
Flight Research Engrg.
G. M. Mfg. Co.
Geophysical Instr. Co
Georator Corp.
Gray Instr. Co.
Green, Henry J.
Gurley, W. & L. E.
Henschel Corp.
Hill & Co.
Illinois Testing Labs.
Instruments Corp.
Kahl Scientific Instr.
Keuffel & Esser
Mine Safety Appliances
Nalley Co.
National Co.
National Radiac, Inc.
Neutronics Research
New London Instr. Co.
North Hills Electric
Photron Instr. Co.
Polarad Electronics
R. S. Electronics
Radiation Counter Labs
Radiation Instr. Co.
Radiation Instr. Dev. Lab.
Reeves Instr. Corp.
Rese Engrg. Co.
Rutherford Electronics
Sanborn Co.
Scott Inc., Hermon Hosmer
Servo Corp. of Amer.
Sierra Electronic Corp.
Spencer-Kennedy
Std. Electronic Res.
Technology Instr. Div.
Tektronix, Inc.
Tel-Instr. Electronics
Tele-Dynamics, Inc.
Telechrome, Inc.
Telonic Industries
Thordarson-Meissner
Transvision, Inc.
U. S. Electronics
Varian Assocs.
Volkers & Schaeffer

ANGULAR MOMENTUM DEMONSTRATOR

Edcliff Instruments
Mico Instr. Co.
Sorenson & Co.

ANNUNCIATORS, see Monitors

ANTENNAS

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Airborne Instruments Lab.
Aircraft Radio Corp.
Airtron, Inc.
Amerac, Inc.
Amer. Electroneering
Amer. Electronics Labs.
Amer. Elite, Inc.
Amer. Mach. & Foundry
Amphenol Electronics
Avion Div.
Bellmore Gear Corp.
Bogart Mfg. Co.
C. G. S. Labs.
Canoga Corp.
Coaxial Connector Co.
Collins Radio
Commercial Products Div.
Cornell-Dubilier
Craig Systems
Dale Products
Dalmo Victor Co.
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DeMornay-Bonardi
Dittmore & Freimuth
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Electron-Radar Prods.
Electron. Spec. Co.
Electrosonic Engrg Co.
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Engrg. & Res. Corp.
Erco Div.
Fed. Telephone & Radio
F. R. Machine Works
Farnsworth Electronics
Fecker, Inc.
Fretco, Inc.
Gabriel Co.
Gates Radio Co.
General Bronze Corp.
Goodyear Aircraft
Hall Scott
Hewlett-Packard
Hycon Mfg.
I. T. E. Circuit Breaker
JFD Mfg.
Johnson Co., E. F.
Kay Electric
Kearfott (Western)
Kennedy & Co., D. S.
Lear, Inc.
Microphase Corp.
Microwave Assocs.
Munston Mfg. & Service
Narda Corp.
National Co.
Natl. Aircraft Corp.
Nems-Clarke
Norden-Ketay Corp.
Nuclear Corp. of Amer.
Polarad Electronics
Polytechnic Res. & Devel.
Prodelin, Inc.
Radiation, Inc.
Raytheon Mfg.
Sanders Associates
Sperry Gyroscope
Sperry Products
Stavid Engrg., Inc.
Sterling Prec. Instr. Corp.
Suffolk Products
Sylvania Electric Prods.
Technicraft Labs., Inc.
Tele-Dynamics, Inc.
Transval Engrg. Co.
Virginia Electronics
WacLine, Inc.
Western Gear Corp.

APPARATUS, Laboratory, see Laboratory Apparatus and Supplies

APPARATUS, Laboratory, Fused Quartz, see Laboratory Apparatus

APPARATUS, Laboratory, Glass, see Laboratory Apparatus

APPARATUS, Vacuum, see Vacuum Apparatus

AREA METERS, see Flowmeters, Area

ARTIFICIAL HORIZONS, see Aircraft Instruments

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Apex Scient.
Atlas Electric Devices
Blue M Electric
Bowen & Co.
Central Scientific
Chatillon & Sons
Curtiss-Wright
Custom Scientific Instr.
Dillon & Co.
Eitzen Co., Louis C.
Exact Weight Scale
Fish-Schurman
Fisher Scientific
Greiner, Emil
Hallikainen Instrs.
Humboldt Mfg.
Koehler Instr. Co.
Kruger Instruments
Labline, Inc.
Olsen Testing Mach.
Permo, Inc.
Phila. Thermometer Co.
Precision Scientific
Riehle Test. Mach. Div.
Scott Testers, Inc.
Soiltest, Inc.
Technical Equipt. Co.
Tell-Tronics Prod.
Temperature Engrg.
Testing Machines, Inc.
Thwing-Albert
Trerice Co., H. O.
Van Keuren Co.
Victory Engrg. Corp.

ASSEMBLIES, Instrument

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Accurate Spring Mfg.
Aerolite Eletctronics
Aeromarine Instr. Co.
Aerovox Corp.
AiResearch Mfg. Co.
Alina Corp.
Allied Prods. Div.
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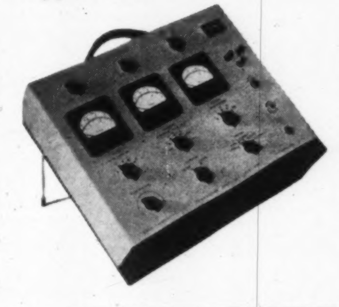
Amer. Instr. Co.
Amer. Kloeckner-Moeller
Amer. Metrix Corp.
Ampco Mfg. Co.
Anderson Co.
Assembly Products
Atlas Prec. Products
Barbour Stockwell
Bausch & Lomb
Bayside Watch Tool Co.
Bellmore Gear Corp.
Bendix, Eclipse-Pioneer
Bendix, Pioneer-Central
Boonton Radio
Bristol Co.
Buhl Optical
Burlington Instr.
Century Geophysical
Chicago Indust. Instr.
Colvin Labs.
Daco Instrument
Daven Co.
Davenport Mfg.



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Dittmore & Freimuth
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Eastern Specialty Co.
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Edna Lite Co.
Edin Co.
Eitzen Co., Louis C.
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Electric Tachometer Corp.
Electro-Chemical Engrg.
Electro-Mech. Div.
Electronics, Inc.
Empire State Labs.
Engis Equipt. Co.
Engrg. & Res. Corp.
Erie Resistor
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Swissomatic Products
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ASSEMBLY MACHINES, Automatic, see Machines, Automatic Circuit Assembly

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Edmund Scientific
Ercona Corp.
Esco Prods. Co.
Farrand Optical
Fecker, Inc.
Fish-Schurman
Gaertner Scientific
Gordon Enterprises
Griswold Mfg.
Gurley, W. & L. E.
Hall-Barkan
Henson Co.
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Lenox Instr. Co.
Librascope, Inc.
Mico Instr. Co.
Opplem Co., Inc.
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Perkin-Elmer
Taylor Instr. Cos.
Tinsley Labs.
Tork Clock Co.
Unertl Optical
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Wild Heerbrugg
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Amerac, Inc.
Arenberg Ultrasonic Lab.
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Automatic Elect. Chicago
Bellmore Gear Corp.
Boonton Radio
British Electronic Sales
Bruno-N. Y. Indust.
Centralab Div.
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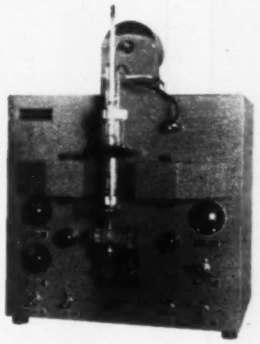
Clarke Instr. Co.
Clarostat Mfg.
Coaxial Connector Co.
Computer Co. of Amer.
Corning Glass Works
Custom Components
Daven Co.
Defiance Engrg. & Micro
DeMornay-Bonardi
Diamond Mfg. Corp.
Diamond Microwave Corp.
Dittmore & Freimuth
Dmeter Mfg.
Electcl. & Phys. Instr.
Electro Impulse Labs.
Electro Products Lab.
Electro-Pulse, Inc.
Electron-Radar Prods.
Electronic Assocs.
Electronic & Engrg. Serv.



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Gadgets, Inc.
General Radio
Geotechnical Corp.
Hansen Electronics
Hewlett-Packard
Hickok Electcl. Instr.
Hycon Mfg. Co.
Hycor Div.
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Internat. Telemeter Corp.
Kay Electric
Kearfott (Western)
Kearfott Co.
Kin Tel
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Mallory & Co., P. R.
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Marconi Instruments
Measurements Corp.
Metavac, Inc.
Micromat Co.
Microphase Corp.
Mid-Century Instrumatic
Muirhead Instrument
Narda Corp.
Newark Electric Co.
Norden-Ketay
Ohmite Mfg.
Photo-Crystals, Inc.
Polaroid Corp.
Polytechnic Res. & Devel.
Radiation, Inc.
RHO Engrg. Co.
RCA Div.
Reiner Electronics
Rutherford Electronics
Sanders Assocs.
Scott Inc., Hermon Hosmer
Servo Corp. of Amer.
Servomechanisms, Inc.
Shallcross Mfg.
Sherron Metallic Corp.
Sound Apparatus Co.
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Stoddart Aircraft Radio
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Technicraft Labs.
Teletronics Labs., Inc.
Telonic Industries
Thordarson-Meissner

Trad Electronics Corp.
Trimount Instr. Co.
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Virginia Electronics
WacLine, Inc.
Weinschel Engrg. Co.
Westronics, Inc.

AUDIO-FREQUENCY EQUIPMENT (see also Amplifiers)

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Aerovox Corp.
Airdesign, Inc.
Air-O-Tronics
Alcor Electronics Corp.
Allied Radio Corp.
Altec Lansing Corp.
Alto Scientific
Amer. Electronic Labs.
Ampex Corp.
Amplifier Co.
Assembly Products
Audio Devel. Instr. Co.
Audio Instrument
Authorized Mfrs. Serv.
Ballantine Labs.
Beam Instr. Co.
Bell Sound Systems
Bendix, Eclipse-Pioneer
Berkeley Scientific
Berndt-Bach
Boonton Radio
Browning Labs.
Bruno-N. Y. Indust.
Brush Electronics
Century Geophysical
Cinema Engrg. Co.
Clark Radio Equipt.
Clarke Instr. Corp.
Clough-Brengle
Collins Radio
Commercial Research Div.
Computer Co. of Amer.
Computer Engrg. Assoc.
Consolidated Avionics
Daven Co.
Davenport Mfg.
Deltron, Inc.
Dittmore & Freimuth
Donner Scientific
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DuMont Labs., Allen B.
Dyna-Empire
Dynapar Corp.
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El Mec Labs.
Electro-Devices (St. Louis)
Electro-Mech. Research
Electro-Medical Lab.
Electro Voice, Inc.
Electronic & Engrg. Serv.
Electro Products Lab.
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Globe Phone Mfg.
Hammarlund Mfg.
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Heiland Div.
Hewlett-Packard
Hickok Electcl. Instr. Co.
Hycor Div.
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Jackson Elect. Instr.
Johnson Co., E. F.
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Lab-Tronics
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Lear, Inc.
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Ling Electronics
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McFarlin Co.
Measurements Corp.
Metron Instr. Co.
Millen Mfg.
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Munston Mfg. & Service
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Pacific Transducer Corp.
Philamon Labs.
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Premier Crystal Labs.
Radio City Products
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Rauland-Borg
Raytheon Mfg.
RCA Div.
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Remler Co.
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Scott, Inc., Hermon Hosmer
Sensitive Res. Instr.
Servo Corp. of Amer.
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Sound Apparatus
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Westport Electric
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AUDIO-FREQUENCY OSCILLATORS, see Oscillators, Audio-Frequency

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Interelectronics Corp.
Lab. of Electronic Engrg.
Magnetic Instr. Co.
Marconi Instruments
Mine Safety Appliances
Scott, Inc., Hermon Hosmer
Shallcross Mfg.
Stoelting Co.

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Aetna Scientific
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Barnstead Still
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Emerson App. Co.
High Pressure Equipt. Co.
Industrial Process Engrg.
Lennard Co.
Parr Instr. Co.
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Pressure Prods. Industries
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Ruska Instr. Corp.
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Buhl Optical
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Dusenbery Co.
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Fish-Schurman
Fuess, Inc.
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Garlynn Engrg.
Georator Corp.
Gordon Enterprises
Griswold Mfg.
Gurley, W. & L. E.
Henson Co.
Jarrell-Ash
Kollmorgen Optical
Lab. Optical
Lindly & Co.
Los Angeles Scientific
Meyer-Opticraft
Northrop Anaheim
Optical Service & Devel.
Opto-Metric Tools
Pacific Optical Corp.
Paloe Optical
Pan-technics, Ltd.
Parr Instr. Co.
Penn Optical & Instr.
Perkin-Elmer
QOS Corp.
Unertl Optical
Zeiss, Inc., Carl
Zoomar Corp.

AUTOMOTIVE SERVICE INSTRUMENTS, see Engine Test Instruments

AUTOTRANSFORMERS, see Transformers, Variable

AVIATION
Airborne, see Aircraft Instruments

AVIATION INSTRUMENTS, Ground

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Amer. Electronics
Assembly Products
Bendix Aviation Corp.
Boonton Radio
Colvin Labs.
Consolidated Avionics
Cook Electric
Electro Instr., Inc.
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Gadgets, Inc.
GE Apparatus Sales
Giannini & Co.
I-L-S Instr. Corp.
Inst. Corp. of Fla.
Kahn & Co.
Kearfott Co.
Kollsman Instr. Corp.
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Narda Corp.
Norden-Ketay
Radio Receptor Co.
Robertshaw-Fulton, Aeron.
Taller & Cooper, Inc.
Transval Engrg.
United Control Corp.
WacLine, Inc.
Wakmann Watch Co.
Waugh Engrg. Co.
Weksler Thermometer

AXLE TESTERS

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Olsen Testing Machine
Riehle Div.
Sperry Products

AZIMUTH INSTRUMENTS, see Navigation Aids

BALANCES (see also the Object of Measurement and Control)

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Chatillon & Sons
Detecto Scales
Dietert Co.
Fisher Scientific
Greiner, Emil
Heusser Instr. Mfg.
LaPine & Co., Authur S.
Metrogram Corp.
Ohaus Scale Corp.
Seederer-Kohlbusch
Taller & Cooper, Inc.
Testing Machines, Inc.
Triner Scale & Mfg
Troemner, Henry
Voland & Sons, Inc.
Wabash Metal Prod.
Welch Mfg. Co., W. M.

BALANCES, Analytical and Precision for Weights and Measures

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Baird-Atomic
Becker Div., Christian
Brinkmann Instruments
Burke & James
Burrell Corp.
Cady & Co.
Central Scientific
Chatillon & Sons
Chicago App. Co.
Coleman Instr.
Detecto Scales, Inc.
Dietert Co.
Exact Weight Scale Co.
Fisher Scientific
Franklin Electronics
Greiner, Emil
Gurley, W. & L. E.
Hadley Assocs.
Heusser Instr. Mfg.
Hunter Spring
Indust. Scientific Inc.
Jarrell-Ash
Kent Cliff Labs.
LaPine & Co.
Metrogram Corp.
Microchemical Service
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Physics Research Labs.
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Schaar & Co.
Scientific Balance
Seedburo Equipt. Co.
Seederer-Kohlbusch
Streeter-Amet
Taller & Cooper
Testing Machines, Inc.
Thomas Co., Arthur H.
Thompson Balance
Torsion Balance
Triner Scale & Mfg.
Troemner, Henry
Voland & Sons
Welch Mfg. Co., W. M.
Wilkins-Anderson Co.
Will Corp.

BALANCES, Automatic Recording

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Brinkmann Instruments
Burrell Corp.
Detecto Scales
Dynamics Res. Assoc.
Engineering Res. & Devel.
Exact Weight Scale
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Fielden Instr. Div.
Franklin Electronics
Gilmore Industries
Hadley Assocs.
Ideal-Aerosmith
Indust. Electronics Engrs.
Indust. Scientific
Kent Cliff Labs.
Metrogram Corp.
Nalley Co.
Phoenix Prec. Instr.
Roller-Smith
Schaar & Co.
Seederer-Kohlbusch
Streeter-Amet
Taller & Cooper
Thayer Scale & Engrg.
Toledo Scale Co.
Voland & Sons
Will Corp.

BALANCES, Gas Density and Specific Gravity (see also Specific Gravity)

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Becker Div., Christian
Beckman, Inc., Arnold O.
Brinkmann Instruments
Burrell Corp.
Central Scientific
Chicago App. Co.
Eberbach & Son Co.
Electrical Devel.
Exact Weight Scale
Fisher Scientific
Greiner, Emil
Hadley Assocs.
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Ohaus Scale
Pfaltz & Bauer
Refinery Supply
Roller-Smith
Schaar & Co.
Seederer-Kohlbusch
Std. Science Supply
Taller & Cooper, Inc.
Toledo Scale
Torsion Balance
Troemner Henry
Welch Mfg. Co., W. M.
Will Corp.

BALANCES, Hydrostatic

Amer. Balance
Central Scientific
Chicago App. Co.
Seederer-Kohlbusch
Welch Mfg. Co., W. M.

BALANCES, Magnetic

Allied Products Div.
Exact Weight Scale
Georator Corp.
Instrument Lab., Inc.
Seederer-Kohlbusch
Voland & Sons
Will Corp.

BALANCES, Magnetic (Geophysical)

Allied Products Div.
Askania-Werke, A. G.
Century Geophysical
Edin Electronics
Geophysical Instrument
Georator Corp.
Ruska Instr. Corp.

BALANCES, Micro

Ainsworth & Sons
Amer. Balance
Becker Div., Christian
Brinkmann Instruments
Burrell Corp.
Cady & Co.
Can. Rad. & Uran.
Central Scientific
Chatillon & Sons
Exact Weight Scale
Franklin Electronics
Greiner, Emil
Heusser Instr. Mfg.
Indust. Scientific Inc.
Jarrell-Ash
Kent Cliff Labs., Div.
Microchemical Service
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Schaar & Co.
Scientific Balance
Seederer-Kohlbusch
Thomas Co., Arthur H.
Torsion Balance Co.
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BALANCES, Surface Tension

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Welch Mfg. Co., W. M.
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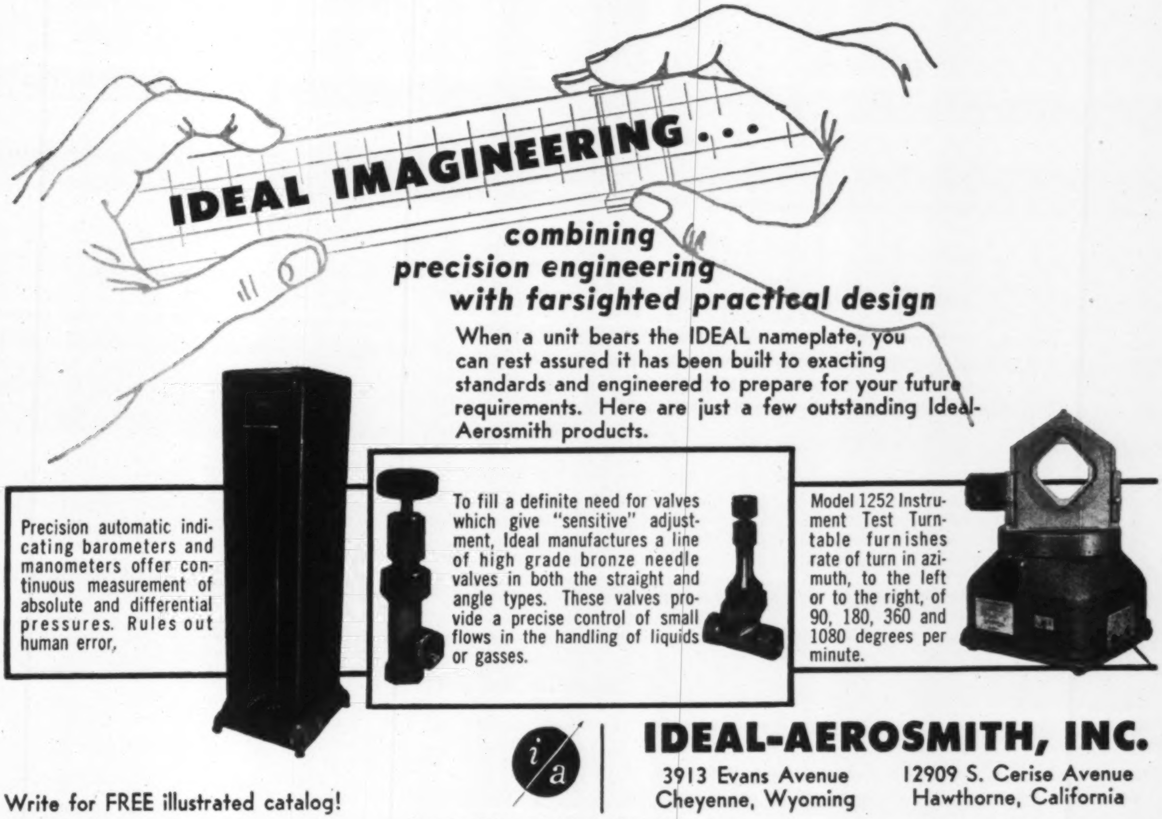

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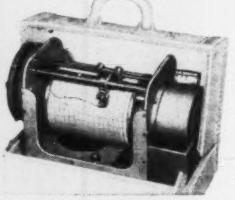

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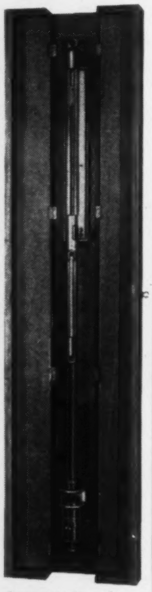

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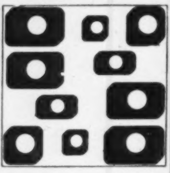
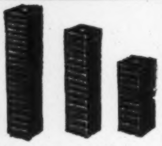
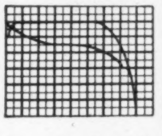
 A correct cell-size for any capacity.	 Wafer Cell construction produces from 1½ volts on up.	 Burgess will make batteries to fit any application.

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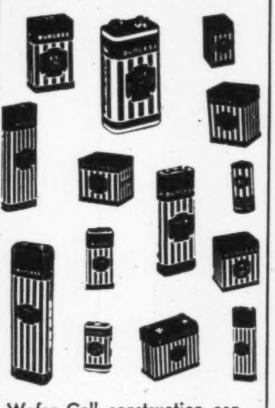

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Acushnett Process Co.
Bakelite Div.
Boston Gear Works, Inc.
Chemalloy Electronics Corp.
Continental-Diamond Fibre
Crane Packing Co.
Crowley & Co.
Graphite Metallizing
Industrial Tectonics
International Powder
Keystone Carbon Co.
Mallory & Co., P. R.
Moraine Prods. Div.
Morganite, Inc.
N. H. Ball Bearings
National Carbon Co.
Norma-Hoffman Bearings
Ohio Carbon Co.
Pic Design Corp.
Polymer Corp.
Raybestos-Manhattan
Richardson Co.
Spaulding Fibre Co.
Thomson Industries
U. S. Gasket Co.

BELLOWS, Kovar

Breeze Corporations
Bristol Co.
Fulton-Sylphon Div.
Giannini & Co.
Stupakoff Div.

BELLOWS, Metallic, including Stainless Steel

Alloy Bellows Engrg.
Askania Reg. Co.
Barton Instr. Corp.
Bendix Aviation Corp.
Breeze Corporations
Bridgeport Thermostat
Bristol Co.
Clifford Mfg. Co.
Colvin Labs.
Cook Electric
Fielden Instr. Div.
Flexonics Corp.
Fulton-Sylphon Div.
Giannini Co.
Hammel-Dahl
Jadow, Inc., B.
Kendall Controls
Manning, Maxwell & Moore
Patterson Co., Wayne D.
PIC Design Corp.
Power Engrg. & Equipt.
Res. Appliance Co.
Summers Gyroscope
Titflex, Inc.
U. S. Gauge Div.
Robertshaw-Fulton

BELLOWS, Plastic

Chicago Rawhide Mfg.
Crane Packing Co.
Garlock Packing Co.
Res. Appliance Co.
U. S. Gasket Co.

BELLOWS, Thermostatic

Bridgeport Thermostat
Bristol Co.
Chicago Metal Hose Corp.
Clifford Mfg.
Cook Electric
Flexonics Corp.
Fulton-Sylphon Div.
General Plate Div.
Giannini & Co.
Mercoid Corp.
Robertshaw-Fulton
Seamlex Company, Inc.
United Electric Controls

BENCHES, Optical, see Optical Benches

BENDING MACHINES, see Machines, Metal Forming

BEVEL PROTRACTORS, see Drawing Instruments

BEZELS

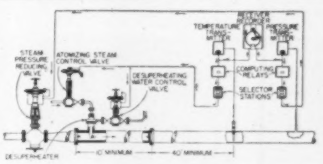
American Emblem Co.
Bayside Watch Tool
Croname, Inc.
Drake Mfg.
DuMont Labs., Allen B.
Electronic Tube Corp.
Erie Resistor
Etched Products Corp.
Grammes & Sons
Grigoleit Co.
Jan Hardware Mfg.
Maryland Etching Co.
Meyer-Opticraft
Millen Mfg. Co.
Modern Technical Supp.
Molded Insulation Co.
National Co.
New Haven Clock
Park Nameplate Co.
Pioneer Instr. Div.
Santay Corp.
Scovill Mfg. Co.
Swift & Anderson
Wadsworth Watch Case
Waterbury Companies
Weber Bros.

BIMETALLIC ELEMENTS, see Thermostatic

BIN LEVEL INDICATORS, see Level Indicators, Bin and Bulk Material

BINAURAL TIMERS, see Timers, Binaural

BINNACLES, see Navigational Instruments



BAILEY DESUPERHEATING & PRESSURE REDUCING CONTROL

- The control system is air-operated and is arranged to automatically maintain the desired final steam temperature by controlling the quantity of the water fed to the Desuperheater.

Uses standard Bailey components for the measurement and control of both temperature and pressure. The temperature measurement is accomplished by using a closed, helium gas-filled system as illustrated or it may be electrically measured by using a Temperature Resistance Element.

The Desuperheating Water Control Valve and the Steam Pressure Reducing Valve are equipped with Bailey Positioning Relays.

Steam temperature and steam pressure are both recorded on the same 12 in. circular chart. Two additional records or two controllers may also be included in the same case if desired.

Request Product Specification M55-1

BAILEY METER COMPANY
1041 IVANHOE ROAD · CLEVELAND, O.
Bailey Meter Company Ltd., Montreal, Canada

For more information circle **57** on inquiry card.

BINOCULARS

Alpha Instr. Co.
Amer. Thermo Ware
Bausch & Lomb
Bendix, Eclipse-Pioneer
Bray Optical Co.
Bronoptics Co.
Bushnell Optical
Clark & Sons
Du Maurier Co.
Edmund Scientific
Ercona Corp.
E&W Optical Co.
Fecker, Inc.
Fuess, Inc.
Griswold Mfg. Co.
Gordon Enterprises
Helio Instr. Co.
Indust. Scientific, Inc.
Kollsman Instr. Corp.
Leitz, Inc.
Meyer-Opticraft
Negus, T. S. & J. D.
Nikon, Inc.
Opplem Co.
Scope Instr. Corp.
Swift & Anderson
Unertl Optical
Warren Knight
White Co.
Wollensak Optical
Ziess, Inc., Carl

BINOCULARS, including Polarizing, Variable Density, etc.

Bausch & Lomb
Bushnell Optical
Edmund Scientific
Gordon Enterprises
Jarrell-Ash
Kollmorgen Optical
Kollsman Instr. Corp.
Polarizing Instr. Co.
QOS Corp.
Unertl Optical

BINS, Small Parts

Falstrom Co.
Federal Screw Prods.
Gold Seal Mfg.
Hall Co.
Littleford Bros.
Regal Plastic Co.
Std. Pressed Steel Co.
United Show Mach.
Valley-National

BLACK LIGHT, see Infrared Sources

BLAST METER, see Flowmeters, Gas, also Pressure Indicators, Peak

BLOCKS, Fuse, see Fuse Blocks

BLOCKS, Gage, see Dimensional Gages, Mechanical

BLOCKS, Terminal, see Terminal Blocks

BOARDS, Bread, see Breadboards

BOILER ROOM INSTRUMENTS, including Condenser Leakage, Damper, Desuperheat, Draft, Feedwater, Specialties, Steam, Stoker etc. (see also Combustion Safeguards, also Gas Analyzers)

Acro Mfg.
Air Assocs.
Askania Reg. Co.
Askania-Werke, A. G.
Atlas Valve Co.
Atwood & Morrill
Autom. Timing & Controls
B-I-F Industries
Beck Co.
Bailey Meter Co.
Barber Colman
Bar-Ray Products
Barton Instr.
Black Sivalls & Bryson
Boylston Co.
Bray Optical
Bristol Co.
Brooke Engrg. Co.
Brooks Rotameter
Builders-Providence, Inc.
B. W. Controller Corp.
Cal-Tronics Corp.
Campbell Co., J. A.
Cash Co., A. W.
Cash Valve Mfg. Corp.
Century Instr. Co.
Cleveland Fuel Equipt.
Climax Div.
Combustion Control Corp.
Conoflow Corp.
Continental Foundry
Cook Electric
Cutler-Hammer
Dahl & Co., G. W.
Davis Reg. Co.
Defender Instr. & Reg.
Denver Fire Clay Co.
De-Tec-Tronic Corp.
Dietz Co., Henry G.
Diamond Power Spec. Corp.
Dressen-Barnes
Dwyer Mfg.
Eclipse Fuel Engrg.
Electronics Prods. Co.
Ellison Draft Gage
Ess Instr. Co.
Fielden Instr. Div.

Bailey
FEED WATER
Control

• Bailey Meter Company offers three distinct feed water control systems. They are:

(1) The Thermo-hydraulic Feed Water Regulator which is suitable for small boilers operating at relatively low pressures. Operates from water level alone and offers low installation costs, removable valve parts, and independence of valve location.

Request Product Specification M85-1.

(2) The Single-Element Air-Operated Feed Water Control System is recommended for installations on which smooth regulation of feed water flow is desired, and a wide regulating range can not be used. Controlled from water level alone as measured by a Bailey Water Level Recorder.

Request Bulletin 106.

(3) The Bailey Three-Element Feed Water Control is recommended for high capacity, low water storage boilers operating at high pressures or for boilers operating at medium pressures with violent load fluctuations. Operated from actual measurement of water flow to the boiler, steam flow from the boiler, and water level within the boiler. It is adjusted to control the rate of water flow to the boiler so that it equals the rate of steam flow from the boiler.

Request Bulletin 105.

BAILEY METER COMPANY
1041 IVANHOE ROAD · CLEVELAND, O
Bailey Meter Company Ltd., Montreal, Canada

For more information circle **58** on inquiry card.

BOILER
ROOM
INSTRUMENTS

- ELECTROLYTIC CONDUCTIVITY APPARATUS FOR STEAM AND CONDENSATE DEGASSING.
- BOILER FEEDWATER MEASUREMENTS.
- A COMPLETE LINE OF RECORDING INSTRUMENTS AVAILABLE IN LINE AND BATTERY POWERED MODELS.

Write for complete catalog

Industrial Instruments Inc.
89 Commerce Road, Cedar Grove, Essex County, N. J.

For more information circle **59** on inquiry card.

Fischer & Porter Co.
Fisher Governor
Foster Engrg. Co.
Foxboro Co.
Fuel Watchman
Fulton-Sylphon Div.
General Controls
General Power Plant
General Reg. Corp.
Gleason-Avery
Hagan Chem. & Controls
Hammel-Dahl
Hays Corp.
Henszey Co.
Industrial Instruments, Inc.
Industrol Corp.
Jerguson Gage
Jo-Bell Products
Johnson Corp.
Johnson Service Co.
Jordan Regulator Corp.
Kates Co., W. A.
Kaye & MacDonald
Kellogg Switchboard
Kieley & Mueller
Klipfel Valves
La Motte Chem. Prod.
Lapp Insulator
Larson Instr. Co.
Leeds & Northrup
Leslie Co.
Lumenite Electronic
Magnetrol, Inc.
Manning, Maxwell & Moore
Marsh Corp., Jas. P.
Mason-Neilan Div.
McAlear Mfg.
McDonnell & Miller
Mercoid Corp.
Mercon Reg. Co.
Meriam Instr. Co.
Merritt Engrg. & Sales
Minneapolis-Honeywell
  Boston Div.
Moore Products
National Co., Inc.
Natural Gas Equipt. Co.
Northern Equipt. Co.
Penberthy Injector Co.
Penn Insts. Div.
Penn Ind. Inst. Div.
Photo Crystals, Inc.
Powers Reg. Co.
Preferred Utilities Mfg.
Reliance Gauge Column
Reliance Instr. Mfg.
Republic Flow Meters
Research Controls
Revere Corp.
Reynolds Gas. Reg.
Roy Co., Milton
Schade Valve Mfg.
Scientific Instr. Co.
Scrayco Mfg. Co.
Security Valve Corp.
Seely Inst. Co., Inc.
Shallcross Mfg.
Shallcross Controls
Simplex Valve & Meter
Soreng Products
Spence Engrg. Co.
Squires Co., C. E.
Star-Martin Gage Co.
Summers Gyroscope
Swartwout Co.
Taylor Instr. Cos.
Tri-Tronics Co.
Trimount Instr. Co.
U. S. Gauge Div.

Valv-Trol Co.
Wallace & Tiernan
Warrick Co.
Watts Reg. Co.
Weston Electcl. Instr.
Wheelco Instr. Div.
White Rodgers Electric
Yarnall-Waring

BOLOMETER TUBES, see Radiation Pickups

BOLOMETERS, see Radiation Pickups

BOLTS, Special, Heat Treated
Aero Supply Mfg. Co.
Albany Prods. Co.
Allmetal Screw Products
Amer. Laubscher
Amer. Screw Co.
Anti-Corrosive Metal Prods.
Autoscrew Co.
Chicago Screw Co.
Conant Bros.
Continental Screw Co.
Federal Screw Prods.
Hartford Machine Screw
Karl, Inc.
Hubbell Metals
Natl. Automatic Prods.
Research Dev. Mfg.
Scovill Mfg.
Stafford Co.
Stronghold Screw Prods.
Torrington Co.
United Screw & Bolt
Wheaton Co.

BOLTS, Special, Stainless Steel
Aero Supply Mfg. Co.
Albany Prods. Co.
Amer. Laubscher
Amer. Screw Co.
Anti-Corrsive Metal Prods.
Automatic Methods, Inc.
Autoscrew Co.
Chicago Screw Co.
Conant Bros.
Continental Screw Co.
Federal Screw Prods.
Hartford Mach. Screw
Heitz, Karl, Inc.
Hubbell Metals
Natl. Automatic Prods.
Research Dev. Mfg.
Schnitzer Alloy Prods.
Star Stainless Screw Co.
Stronghold Screw Prods.
Swissomatic Products
Torrington Co.
United Screw & Bolt
Waltham Screw Co.
Woodruff & Stokes

BOMBS, High Pressure for Testing Bottom Hole Samples, Oil and Gas
Amer. Instr. Co.
Autoclave Engrs.
Coleman Instr. Co.
Greiner, Emil
High Pressure Equipt.
Hoke, Inc.
Koehler Instr. Co.
Labline, Inc.
Precision Scientific
Pressure Prods. Industries
Refinery Supply Co.
Ruska Instr. Corp.
Vapor Recovery Systems

BOMBS, Hydrogenation, Lean Oil
Amer. Instr. Co.
Autoclave Engineers
Daniel Orifice Fitting
High Pressure Equipt. Co.
Parr Instr. Co.
Precision Scientific
Pressure Prods. Industries
Ruska Instr. Corp.

BOMBS, Micro Combustion
Autoclave Engineers
Fish-Schurman
High Pressure Equipt. Co.
Indust. Scientific
Microchemical Service
Parr Instr. Co.
Precision Scientific
Pressure Prods. Industries
Wilkens-Anderson Co.

BOMBS, Oxygen, Sodium Peroxide, Sulphur, etc.
Autoclave Engrs.
Central Scientific
Emerson App. Co.
Greiner, Emil
High Pressure Equipt.
Hill & Co.
Indust. Scientific, Inc.
Koehler Instr. Co.
Labline, Inc.
Parr Instr. Co.
Precision Scientific
Pressure Prods. Industries
Refinery Supply
Scott Co., Hermon Hosmer
Scott Testers, Inc.
Wall Colmonoy
Wilkens-Anderson Co.

BOMBS, Reid Vapor Pressure
Amer. Instr. Co.
Central Scientific
Daniel Orifice Fitting
Greiner, Emil
Hallikainen Instruments
Indust. Scientific
Koehler Instr. Co.
Labline, Inc.
Precision Scientific
Refinery Supply Co.
Technical Equipt. Co.
Weston Electcl. Instr.
Wilkens-Anderson Co.

BOMBS, Specific Gravity, see Specific Gravity Bombs

BOMBS, Temperature, see Temperature Bombs

BORE INSPECTION INSTRUMENTS, see Telescopes, Bore, Inspection

BOTTLES, Cubic Feet, see Specific Gravity Bottles

BOTTLES, Specific Gravity, see Specific Gravity Bottles

BOTTLES, Weighting, see Weighing Bottles

BOURDON TUBES and COILS, see Tubing, Bourdon

BOW CIRCLES, see Drawing Instruments

BOXES, see Cabinets, also Panels

BOXES, Ayrton Shunt, see Shunts, Ayrton

BOXES, Ratio, see Resistance Ratio Boxes

BOXES, Resistance, see Resistance Boxes

BOXES, Thermostat, see Thermostats

BRAKE TESTING INSTRUMENTS
Amer. Instr. Co.
Askania-Werke A. G.
Bendix Aviation Corp.
Clough-Brengle
Commercial Research Div.
Cramer Controls Corp.
Emery Co.
Epic Inc.
Gilmore Industries
Triumph Mfg.
Wallace & Tiernan

BRAKES, Mechanical, Magnetic
Electronic Mechanisms
Warner Elect. Brake

BREADBOARDS
Aerolite Electrs.
Davenport Mfg.
Dittmore & Freimuth
DuMont Labs., Allen B.
Gap Instr. Co.
Helipot Div.
Neutronics Research
Peschel Electronics
PIC Design Corp.
Servo Corp. of Amer.
Servomechanisms, Inc.
Sterling Precision Corp.
Tri-Dex Electronics
Victor Electronic
Western Gear Corp.

BREAKERS, Circuit, see Circuit Breakers

BRIDGES, Balancing and Calibrating, Manual (see also Potentiometers)
Allegany Instr. Co.
Amer. Helicopter Div.
B & F Instruments
B & H Instr. Co.
Boonton Radio
Century Electronics & Insts.
Consol. Electrodynamics
Edcliff Instruments
Electro Measurements, Inc.
Heiland Div.
Indust. Test Equipt. Co.
Julie Res. Labs.
Kaiser Aircraft & Elect.
Leeds & Northrup
Magnetic Instr. Co.
Marconi Instruments
Owen Labs. Inc.
Phoenix Prec. Inst.
Physics Res. Labs.
Polyphase Instr.
Research Instr. Co.
Rubicon Co.
Shallcross Mfg.
Task Corp
Tech Labs., Inc.

BRIDGES, Electrical, AC
Acton Labs.
Aerovox Corp.
Assoc. Research Inc.
Atlantic Research Corp.
Aviation Engrg. Co.
Baldwin-Lima-Hamilton
Boonton Radio
Bristol Co.
Brown Electro-Measurement
Brush Electronics
Cal-Tronics Corp.
Cambridge Instr. Co.
Central Scientific
Chicago Indust. Instr.
Clough-Brengle
Consol. Electrodynamics
Daven Co.
Deltron, Inc.
Devtronics, Inc.
Electro Instr., Inc.
Electro Measurements, Inc.
Electronic Dev. Lab.
Electronic & Engrg. Serv.
Electronic Prods. Co.
El-Tronics Co.
Federal Telephone & Radio
Feiler Engrg. Co.
Fielden Instr. Div.
Freed Transf. Co.
GE, Apparatus Sales
General Radio
Gray Instr. Co.
Hickok Elec. Instr.
Indikon Co.
Industrial Insts., Inc.
Indust. Test Equipt. Co.
Kahn & Co.
Land-Air, Inc.
Leeds & Northrup
Magnetic Instr. Co.
Marconi Instruments
Muirhead Instrument
Phoenix Prec. Inst.
Physics Res. Labs.
Polytechnic Res. & Dev.
Radio City Products
Research Instr. Co.
Reiner Electronics
Rubicon Co.
Shallcross Mfg.
Sherron Metallic
Southw. Indust. Electronics
Sweets Co., Martin
Technology Instr. Corp.
Thordarson-Meissner
Tobe Deutschmann
Topp Industries
Transformers, Inc.
United Optical
United Transf. Corp.

BRIDGES, Electrical, Capacitance
Acton Labs.
Aerovox Corp.
Assoc. Research Inc.
Aviation Engrg. Co.
Avien Inc.
Boonton Electronics
Boonton Radio
Bristol Co.
Brown Electro-Measurement
Brush Electronics
C.G.S. Labs.
Cal-Tronics Corp.
Cambridge Instr. Co.
Central Scientific
Chicago Indust. Instr. Co.
Clegg Labs.

BAILEY BOILER METER
Steam Flow—Air Flow Ratio Meter

• This dependable and accurate guide to maximum combustion economy is easily understood and followed by operators. It indicates, records, and integrates Steam Flow from the boiler, records Air Flow supplied for combustion, and records Flue Gas Temperature.

Best combustion efficiency is secured by keeping the Steam Flow and Air Flow pens together so that the records coincide. The record of the Flue Gas Temperature when compared with that of Steam Flow shows the condition of baffles and tubes, and indicates heat absorption efficiency.

The **Bailey Boiler Meter** reduces fuel costs, lessens maintenance and outage, lowers standby costs, and adds capacity. It is suitable for boilers of 100 hp or more and for all types of fuels.

To obtain maximum benefit from the **Bailey Boiler Meter**, it should be made an integral part of a Bailey Combustion Control System so that combustion losses are automatically corrected as they tend to appear.

Request Product Specification M61-1.

BAILEY METER COMPANY
1041 IVANHOE ROAD · CLEVELAND, O.
Bailey Meter Company Ltd., Montreal, Canada

For more information circle **60** on inquiry card.

Clippard Instr. Lab.
Clough-Brengle
Commun. Measmts. Lab.
Cornell-Dubilier
Deltron, Inc.
Electro Measurements, Inc.
Electronic Devel. Lab.
Electronic & Engrg. Serv.
Electronic Instr. Co.
Epic Inc.
Federal Telephone & Radio
Feiler Engrg. Co.
Fielden Instr. Div.
Freed Transf. Co.
GE
General Radio
Gray Instr. Co.
Gulton Industries
Hickok Elec. Instr.
Industrial Dev. Labs.
Indikon Co.
Industrial Control
Industrial Insts., Inc.
Indust. Test. Equipt. Co.
Jackson Electcl. Insts.
Jarco Services
Kahn & Co.
Kin Tel
Laboratory Equipt. Co.
Leeds & Northrup
MacLeod & Hanopol
Magnavox Co.
Magnetic Instr. Co.
Marconi Instruments
Measurements Corp.
Muirhead Instrument
RCA
Radio City Products
Research Instr. Co.
Rubicon Co.
Scientific Specialties
Shallcross Mfg. Corp.
Sherron Metallic
Sierra Electronic
Simmonds Accessories
Simpson Electric
Shallcross Mfg.
Solar Mfg.
Southwestern Indust. Elect.
Sprague Electric
Sylvania Elect. Prods.
Sweets Co., Martin
Technology Instr. Corp.
Thordarson-Meissner
Tobe Deutschmann
Topp Industries
Triplett Electc.
Triumph Mfg.
United Optical

BRIDGES, Electrical, Conductivity

Aerovox Corp.
Assoc. Research Inc.
Boonton Radio
Bristol Co.
Cal-Tronics Corp.
Cambridge Instr. Co.
Central Scientific
Clippard Instr. Lab.
Edin Electronics
Electro-Mec Lab.
Electro Measurements, Inc.
Electronic Prods. Co.
Federal Telephone & Radio
Feiler Engrg. Co.
Fielden Instr. Div.
Fisher Research Lab.
Freed Transf. Co.
GE.
General Radio
Gray Instr. Co.
Industrial Insts., Inc.
Julie Res. Labs.
Kahn & Co.
Klett Mfg.
Leeds & Northrup
Marconi Instruments
Magnetic Instr. Co.
Mira Scientific Instr.
Natl. Inst. Labs.
Rubicon
Sensitive Res. Instr.
Shallcross Mfg.
Sherron Metallic Corp.
Sorvall Inc.
Sweets Co., Martin
Thwing-Albert
Topp Industries
Thordarson-Meissner
United Optical

BRIDGES, Electrical, DC

Assoc. Research Inc.
Baldwin-Lima-Hamilton
Barber-Colman
Barnes Devel. Co.
B & H Instr. Co.
B & F Instr. Co.
Borden Engrg. Div.
Bristol Co.
Brown Electro-Measurement
Cal-Tronics Corp.
Cambridge Instr. Co.
Chicago Indust. Instr.
Clegg Labs.
Clippard Instr. Lab.
Daven Co.
Devtronics, Inc.
Donner Scientific
Eastern Precision Resistor
Edin Electronics
Electro Instr., Inc.
Electro-Mec Lab.
Electro Measurements, Inc.
Electronic Devel. Lab.
El-Tronics, Inc.
Eppley Laboratory, Inc.
Federal Telephone & Radio
Feiler Engrg. Co.
Fielden Instr. Div.
Fisher Scientific
Freed Transf. Co.
General Radio
Gray Instr. Co.
Humphrey Inc.
Indust. Test Equipt. Co.
Industrial Electronics

Industrial Insts., Inc.
Julie Res. Labs.
Kahn & Co.
Leeds & Northrup
Magnetic Instr. Co.
Marconi Instruments
Measurements Corp.
Muirhead Instrument
Phoenix Prec. Inst.
Physics Research Labs.
Pimex, Inc.
Radio City Products
RCA
Reiner Electronics
Research Instr. Co.
Rubicon Co.
Shallcross Mfg. Co.
Sherron Metallic Corp.
Sticht Co.
Sweets Co., Martin
Thordarson-Meissner
Thwing-Albert
Topp Industries
United Optical
Winslow Co.

BRIDGES, Electrical, Hoopes

Austin Co.
Freed Transf. Co.
Gray Instr. Co.
Leeds & Northrup
Magnetic Instr. Co.
Thordarson-Meissner

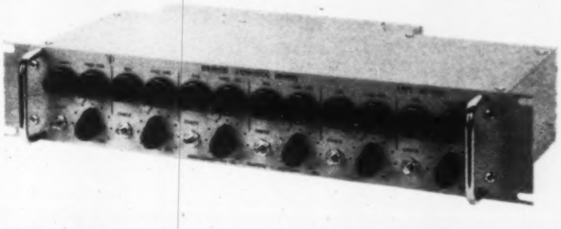
BRIDGES, Electrical, Impedance

Acton Labs.
Advance Electronics
Allied Prods. Div.
Atlantic Research
Boonton Radio
Bristol Co.
Brown Electro-Measurement
Brush Elehtronics
C.G.S. Labs.
Cal-Tronics Corp.
Chesapeake Instr. Corp.
Chicago Indust. Instr.
Clarke Instr. Corp.
Clegg Labs.
Clough-Brengle
Conant Labs.
Daven Co.
Deltron, Inc.
Electro Measurements, Inc.
Electronic Devel. Lab.
F. R. Machine Works
Federal Telephone & Radio
Feiler Engrg. Co.
Fielden Instr. Div.
Freed Transf. Co.
GE
General Radio
Gray Instr. Co.
Hewlett-Packard
Hickok Elec. Instr.
Industrial Insts., Inc.
Indust. Test Equipt.
Kahn & Co.
Kin Tel
Leeds & Northrup
Magnetic Instr. Co.
Marconi Instruments
Meyer-Opticraft
Millivac Instruments
Muirhead Instrument
Radex Corp.
Radio City Products
RCA
Reliance Instr. Mfg.
Reiner Electronics
Research Instr. Co.
Scientific Specialties
Scott, Inc., Hermon
Shallcross Mfg.
Sierra Electronic
Southwestern Indust.
Sweets Co., Martin
Technology Instr. Co
Thwing-Albert
Topp Industries
United Optical
Waters Mfg.
Winslow Co.

BRIDGES, Electrics Inductance

Acton Labs.
Allied Prods. Div.
Assoc. Research Inc.
Berkeley Div.
Boonton Radio
Bristol Co.
Brown Electro-Measurement
Brush Electronics
Cal-Tronics Corp.
Cambridge Instr. Co.
C.G.S. Labs.
Chicago Indust. Instr.
Clegg Labs.
Clough-Brengle
Daven Co.
Electro Measurements, Inc.
Electronic Devel. Lab.
Electronic Instr. Co.
Federal Telephone & Radio
Feiler Engrg. Co.
Fielden Instr. Div.
Freed Transf. Co.
GE
General Radio
Gray Instr. Co.
Hickok Elec. Instr.
Industrial Instr., Inc.
Indust. Test Equipt. Co.
Kahn & Co.
Kin Tel
Leeds & Northrup
Magnetic Instr. Co.
Marconi Instruments
Measurements Corp.
Muirhead Instrument
Pacific Instr. Co
Research Instr. Co.
Raytheon Mfg.
RCA
Rubicon Co.

TYPE BC-266 BRIDGE CONTROL PANEL



This modern bridge control is the most complete, flexible, and compact unit available, as well as one of the most inexpensive. It provides for six channels of from 60 to 1000-ohm gages in any configuration, with shunt or series calibration.

The Owen line of strain gage equipment includes precision single and multi-channel power supplies for "floating" circuitry, and control, balance, indicator, and calibration units—all on modular panels. Custom designs for special applications.

Owen LABORATORIES

55 Beacon Place
Pasadena, California, USA
Representatives in Principal Cities

For more information circle **61** on inquiry card.

Shallcross Mfg.
Sierra Electronic Corp.
Southw. Ind. Electronics
Sweets Co., Martin
Technology Instr., Corp.
Thordarson-Meissner
Topp Industries
Transformers, Inc.
Triumph Mfg.
United Optical
Waters Co.
Winslow Co.

BRIDGES, Electrical, Kelvin

Assoc. Research Inc.
Baldwin-Lima-Hamilton
Beck Bros.
Bristol Co.
Cambridge Instr. Co.
Central Scientific
Eastern Precision Resistor
Electro Prods. Lab.
Electro-Tech Equip.
Eppley Laboratory
Feedback Controls
Feiler Engrg. Co.
Freed Transf. Co.
GE, Apparatus Sales
Gray Instr. Co.
Industrial Insts., Inc.
Kahn & Co.
Leeds & Northrup
Physics Research Labs.
Pimex, Inc.
Research Instr. Co.
Rubicon Co.
Shallcross Mfg.
Sticht Co.
Thwing-Albert
Weston Electcl. Instr.
Winslow Co.

BRIDGES, Electrical, Limit

ACF Electronics
Assoc. Research Inc.
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Electronic Devel. Lab.
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Federal Telephone & Radio
Feiler Engrg. Co.
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Indikon Co
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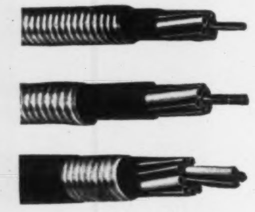

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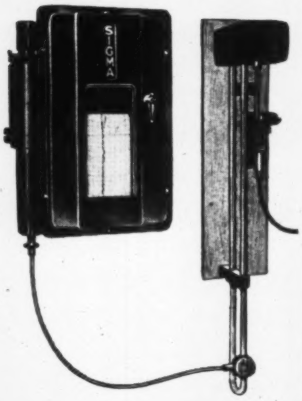

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Emerson App. Co.
Ever Ready Thermometer
Fisher Scientific
Greiner, Emil
Indust. Scientific
Parr Instr. Co.
Precision Scientific
Prec. Thermom & Insts.
Welch Mfg. Co., W. M.
Wilkens-Anderson

CALORIMETERS, Gas

Amer. Meter Co.
Beckman Instrs.
Central Scientific
Connelly, Inc.
Cosa Corp.
Cutler-Hammer
Ever Ready Thermometer
Hays Corp.
Indust. Scientific
Labline, Inc.
Palmer Thermometer, Inc.
Precision Scientific
Prec. Thermom. & Insts.
Refinery Supply Co.
Sierra Electronic
Welch Mfg. Co., W. M.
Wilkens-Anderson

CALORIMETERS, Miscellaneous, including Peroxide Bomb, Photo-electric, Steam, etc.

Amer. Electronic Labs.
Beckman Instrs.
Central Scientific
Chemalloy Electronics
Ellison Draft Gage
Ever Ready Thermometer
Fisher Scientific
Greiner, Emil
Indust. Scientific
Natl. Appliance Co.
Parr Instr. Co.
Polytechnic Res. & Devel.
Res. Appliance Co.
WacLine, Inc.
Wilkens-Anderson

CALORIMETERS, Oxygen Bomb

Central Scientific
Emerson App. Co.
Ever Ready Thermometer
Fisher Scientific
Greiner, Emil
Indust. Scientific
Parr Instr. Co.
Refinery Supply Co.
Wilkens-Anderson

CAMERA SHUTTER TESTERS

Berkeley Div.
Chatillon & Sons
Dynapar Corp
G. M. Mfg.
Gordon Enterprises
Hupp Instrumentation
Potter Instr. Co.
Hycon Mfg. Co.
I-L-S Instr. Co.
Shepard Labs.
Sunshine Scientific
Systron Corp.
Taller & Cooper
Triumph Mfg.

CAMERAS, Aerial

Abrams Corp.
Amer. Instr. Co.
Amer. Optical Co.
Bell & Howell
Bronoptics Co.
Daco Instrument
Farrand Optical
Fairchild (Syosset)
Fecker, Inc.
Flight Res., Inc
Gordon Enterprises
Hulcher Co.
Hycon Electronics
Inst. Corp. of Fla.
Hycon Mfg.
Jack Scient. Instr. Co., Bill
Librascope, Inc.
Mauer, Inc.
Norden-Ketay
Opplem Co., Inc.
Pacific Labs.
Perkin-Elmer
Specialties, Inc.
Sterling Prec. Instr. Corp
Taller & Cooper
Testa Mfg. Co
Topp Industries
Unertl Optical
Vectron, Inc.
Vought Co.
Wild Heerbrugg
Wollensak Optical

CAMERAS, Microfilm

Abrams Instr. Corp.
Amer. Optical
Bell & Howell
Eastman Kodak
Ercona Corp.
Gordon Enterprises
Graflex Corp.
Mauer, Inc.
Microstat Corp.
Nikon, Inc.
Pacific Labs.
Photographic Products, Inc
Praktica Co.
Remington Rand
Vectron, Inc.
Williamson Devel. Co.
Zeiss Inc., Carl

CAMERAS, Oscilloscope Recording

Abrams Instr. Corp.
Allegany Instr. Co.
Amer. Instr. Co.
Aremac Assocs.
Beattie-Colman, Inc.
Berkshire Labs.
Berndt-Bach
Browning Labs.
Cambridge Instr. Co.
Century Geophysical
Coleman Instr. Co.
DuMont Labs., Allen B.
Edgerton, Germeshausen
Electro-Medical Lab.
Electronic Tube Corp.
Fairchild (Syosset)
Flight Res., Inc.

General Radio
Gordon Enterprises
Grass Instr. Co.
Heiland Div.
Houston-Fearless Corp.
Hycon Mfg.
Jack Scient. Instr. Co., Bill
Kearfott (Western)
Mauer, Inc.
Midwestern Instruments
Nikon, Inc.
Norden-Ketay Corp.
Pace Engrg. Co.
Pacific Labs.
Perkin-Elmer Corp.
Photographic Products, Inc.
Praktica Co.
Richardson Camera Co.
Rutico, Inc.
Seismograph Service Corp.
Southw. Ind. Electronics
Taller & Cooper
Texas Instrs. Inc.
Traid Corp.
Unertl Optical
Warrick Co.
Vought Co.
Wollensak Optical
Zoomar Corp.

CAMERAS, Scientific, including Back Reflection

Abrams Instr. Corp.
Bausch & Lomb
Beattie-Coleman
Beckman & Whitley
Bell & Howell Co.
Brinkmann Instruments
Bronoptics Co.
Brubaker, Inc.
Cambridge Instr. Co.
Century Geophysical
Coleman Instr. & Mfg.
Curtiss Labs. Inc.
DuMont Labs., Allen B.
Eastman Kodak
Edgerton, Germeshausen
Electro-Medical Lab.
Ercona Corp.
Farrand Optical
Fecker, Inc.
Flett Lab.
Flight Research Inc.
G M Mfg.
Gadgets, Inc.
GE, X Ray
General Radio
Gordon Enterprises
Graflex Corp.
Hayes Scientific App.
Heiland Div.
Henson Co.
Hulcher Co.
Hycon Mfg. Co.
Jack Scient. Instr. Co., Bill
Jacobs Instr. Co.
Jarrell-Ash
Laboratory Optical
Lafayette Instr. Co.
Leitz, Inc.
Librascope, Inc.
Mauer, Inc.
Mico Instr. Co.
North Amer. Philips
Opplem Co.
Pancro Mirrors
Perkin-Elmer
Phoenix Prec. Inst.
Picker X Ray
Praktica Co.
Process & Instruments
Richardson Camera Co.
Rutico Inc.
Schneider-Cogswell
Scient. Inst. Dev. Lab.
Stoelting Co.
Taller & Cooper
Telecomputing Corp.
Topp Industries
Traid Corp.
Unertl Optical Co.
Victor Laboratory
Vought Co.
Warrick Co.
Zeiss Inc., Carl
Zoomar Corp.

CAMERAS, Scientific, Diffraction, see X-Ray Cameras, Diffraction

CAMERAS, Scientific, Motion Picture, Including High Speed

Aremac Assocs.
Askania-Werke A. G.
Abrams Instrument
Barnes Devel. Co.
Beckman & Whitley
Bell & Howell
Belock Instr.
Benson-Lehner Corp.
Berndt-Bach
Bronoptics Co.
Brubaker, Inc.
Eastman Kodak
Ercona Corp.
Fairchild Camera & Instr.
Farrand Optical
Fecker, Inc., J. W.
Flight Res. Inc.
Fruengel Inc.
General Radio
Georator Corp.
Gordon Enterprises
Henson Co.
Houston-Fearless
Inst. Corp. of Fla.
Jacobs Instruments
Jack Scient. Instr. Co., Bill
Lafayette Instr. Co.
Librascope, Inc.
Mauer, Inc.
Mitchell Camera Corp.
Opplem Co., Inc.
Pancro Mirrors
Perkin-Elmer
Praktica Co.
Process & Instruments
Richardson Camera Co.
Scherr Co.
Taller & Cooper, Inc.
Topp Industries
Traid Corp.
Vectron, Inc.
Vought Co.
Warrick Co.
Wollensak Optical
Zeiss, Inc., Carl
Zoomar Corp.

CAMERAS, Scientific, Photo Micro, see Microscopes, Metallographic

CAMERAS, Television, see Television, Industrial

CAPACITANCE INDICATORS

ACF Electronics
Allied Radio Corp.
Aerovox Corp.
Assoc. Research Inc.
Ballantine Labs.
Barnes Devel. Co.
Biddle Co., Jas. G.
Boonton Radio
Bradshaw Instruments
Bristol Co.
Brown Electro-Measurement
Brush Electronics
Cambridge Instr. Co.
Chicago Indust. Instr.
Clippard Instr. Lab.
Clough-Brengle
Cornell-Dubilier
Daystrom Instr. Div.
Decker Aviation
Deltron, Inc.
Electro-Measurements
Electronic Devel. Lab.
Electronic Instr. Co.
Erdco Engrg. Co.
Federal Telephone & Radio
Feiler Engrg. Co.
Fielden Instr. Div.
Fox Valley Instr.
Foxboro Co.
GE, Apparatus Sales
General Radio
Hickok Electcl. Instr.
Hygrotester Inc.
Indikon Co.
Industrial Control Co.
Industrial Instr. Corp.
Industrial Test Equipt.
Instr. Associates
Instruments, Inc.
Instrument Labs.
Jackson Electcl. Instr.
Jarco Services
Kahn & Co.
Kay Electric
Kin Tel
Keithley Instrs., Inc.
Kellogg Switchboard
Leeds & Northrup
Liquidometer Corp.
MacLeod & Hanopol
Marconi Instruments
Minneapolis-Honeywell, Boston Div.
New Haven Clock
Oil Well Water Loc. Co.
Opad Electric
Panoramic Radio
Phaostron Co.
Physics Research Labs.
Potter Co.
Premier Crystal Labs.
Premier Research
Pyramid Electric
Radio City Products
RCA
Reiner Electronics
Research Instr. Co.
Robertshaw-Fulton
Rubicon Co.
Sargent & Co.
Schauer Mfg. Co.
Shallcross Mfg.
Sherron Metallic Corp.
Sickles Div.
Sierra Electronic
Simmonds Aerocessories
Solar Mfg.
Sprague Electric
Sun Electric
Sylvania Elect. Prods.
Tobe Deutschmann
Triplett Electcl. Instr.
Westburg Mfg. Co.
Weston Electcl. Instr.
Williams App. Co.
Wilson & Co.
Yellow Springs Instr.

CAPACITANCE STANDARDS, see Standards, Capacitance

CAPACITOR FILMS

Aerovox Corp.
Aircraft-Marine Prods.
Balco Research Labs.
Dearborn Electronic Labs.
Emerson & Cuming
GE
Potter Co.
San Fernando Electric

CAPACITORS, Air

Bud Radio
Cambridge Instr. Co.
Cardwell Mfg.
Chicago Condenser Corp.
Condenser Prods. Co.
Corning Glass Works
Dittmore & Freimuth
Erie Resistor
GE, Apparatus Sales
General Instr. Co.
General Radio
Hammarlund Mfg.
Insuline Corp. of Amer.
JFD Mfg. Co.
Johanson Mfg. Corp.
Johnson Co., E. F.
Leeds & Northrup
Millen Mfg. Co.
Muirhead Instrument
National Co.
New Haven Clock
Newark Electric Co.
North Amer. Philips
Sarkes Tarzian Inc.
Sickles Div.
U. S. Gasket Co.
WacLine, Inc.
Wilmar Mfg.

CAPACITORS, Ceramic

Aerovox Corp.
AiResearch Mfg. Co.
Allen-Bradley
Amer. Condenser Co.
Amer. Lava Corp.
Arnhold Ceramics
Astron Corp.
Cambridge Thermionic
Capcon Corp.
Centralab Div.
Cornell Dubilier
Dilectron Div.
Electra Mfg. Co.
Erie Resistor
Fast & Co.
Filtron Co., Inc.
GE Spec. Electronic
Gudeman Co.
Hi-Q Div.
Insuline Corp. of Amer.
Maida Development
Mallory & Co., P. R.
Mucon Corp.
Newark Electric Co.
Potter Co.
Speer Carbon
Sprague Electric
Stupakoff Div.
Welwyn Internat.

CAPACITORS, Electrolytic

Aerovox Corp.
Amer. Condenser Co.
Astron Corp.
Capcon, Corp.
Chicago Condenser
Cornell-Dubilier
DuMont-Airplane
Fansteel Metallurgical
GE, Apparatus Sales
Gudeman Co.
Industrial Condenser Corp.
Kellogg Switchboard
Magnavox Co.
Mallory & Co., P. R.
Micamold Electronics
National Co., Inc.
New Haven Clock
Newark Electric Co.
Ohmite Mfg.
Planet Mfg.
Pyramid Electric
Sangamo Electric
Solar Mfg.
Sprague Electric
Tobe Deutschmann
Walker-Jamieson
Westinghouse Electric

CAPACITORS, Fixed Composition.

Aerovox Corp.
AiResearch Mfg. Co.
Balco Res. Labs.
Carbon Div.
Cornell-Dubilier
Corning Glass Works
Dearborn Electronic Labs.
DuMont-Airplane
Erie Resistor
Fed. Telephone & Radio
GE, Apparatus Sales
Gudeman Co.
Hansen Electronics
Hopkins Engrg. Co.
Industrial Condenser Corp.
Mallory & Co., P. R.
Potter Co.
Pyramid Electric
Sangamo Electric
Stackpole Carbon
Tobe Deutschmann Corp.

CAPACITORS, Gas Filled

Epic Inc.
GE
Johnson Co., E. F.
Lapp Insulator

CAPACITORS, High Voltage

AMP, Inc.
Aerovox Corp.
Amer. Condenser Co.
Amperex Electronic
Arnhold Ceramics
Axel Brothers
Capcon Corp.
Centralab Div.
Chicago Condenser Corp.
Condenser Products
Cornell-Dubilier
Corning Glass Works
Dearborn Electronic Labs.
Electra Mfg. Co.
Epic Inc.
Erie Resistor
Fast & Co.
Filtron Co., Inc.
GE, Apparatus Sales
Gudeman Co.
Hi-Q Div.
Hopkins Engrg.
Industrial Condenser Corp.
Jennings Radio Mfg.
Johnson Co., E. F.
Lapp Insulator
Mallory & Co., P. R.
Micamold Electronics
National Co.
New Haven Clock
Plastic Capacitors, Inc.
Pyramid Electric
Sangamo Electric
Southern Electronics
Speer Carbon Co.
Sprague Electric
Texas Insts., Inc.
Tobe Deutschmann Corp.
U. S. Electr. Dev. Corp.

CAPACITORS, Metallized Paper

Aerovox Corp.
Airborne Access. Corp.
Amer. Condenser Co.
Astron Corp.
Capcon Corp.
Chicago Condenser
Cornell-Dubilier
Dearborn Electronic Labs.
Filtron Co., Inc.
Gudeman Co.
Hopkins Engrg. Co.
Industrial Condenser Corp.
Intelex Systems
Mallory & Co., P. R.
Newark Electric Co.
Potter Co.
Pyramid Electric
San Fernando Electric
Spraque Electric
Tobe Deutschmann
U. S. Electr. Devel. Corp.

CAPACITORS, Mica

Aerovox Corp.
American Condenser Co.
Arnhold Ceramics
Cambridge Instr. Co.
Capcon Corp.
Centralab Div.
Chicago Condenser
Continental-Diamond Fibre
Cornell-Dubilier Elect.
Crystal Research Labs.
Electronic Fabricator
Erie Resistor
GE, Apparatus Sales
General Radio
Industrial Insts., Inc.
Kellogg Switchboard
Lectronic Res. Labs.
Leeds & Northrup
Mallory & Co., P. R.
Measurements Corp.
Micamold Electronics
Muirhead Instrument
National Co., Inc.
Newark Electric Co.
New Haven Clock
RCA
Rubicon Co.
Sangamo Electric
Sickles Co.
Solar Mfg.
Sprague Electric
United Condenser
Winslow Co.

CAPACITORS, Paper

Aerovox Corp.
Amer. Condenser Co.
Arnhold Ceramics
Astron Corp.
Automatic Electric
Axel Brothers
Capcon Corp.
Chicago Condenser Corp.
Condenser Products
Cornell-Dubilier
Corson Electric Mfg.
Dearborn Electronic Labs.
DuMont-Airplane
Electrical Utilities
Fast & Co.
Film Capacitors, Inc.
Filtron Co., Inc.
GE, Apparatus Sales
General Radio Co.
Gudeman Co.
Hopkins Engrg. Co.
Industrial Condenser Corp.
Kellogg Switchboard
Lectronic Res. Labs.
Lenkurt Electric
Mallory & Co., P. R.
Micamold Electronics
Muirhead Instrument
National Co., Inc.
New Haven Clock
Newark Electric Co.
PCA Electronics
Plastic Capacitors, Inc.
Potter Co.
Pyramid Electric
San Fernando Elect. Mfg.
Sangamo Electric
Solar Mfg.
Sprague Electric
Stromberg-Carlson
Tennant Sons & Co.
Texas Insts., Inc.
Tobe Deutschmann
U. S. Electr. Dev. Corp.

CAPACITORS, Plastic Dielectric

Aerovox Corp.
Airborne Access. Corp.
Amer. Condenser Corp.
Astron Corp.
Axel Brothers
Balco Research Labs.
Chicago Condenser Corp.
Condenser Prods. Co.
Continental-Diamond Fibre
Cornell-Dubilier
Corson Electric Mfg.
Dearborn Electronic Labs.
DuMont-Airplane
Electronic Fabricators
Erie Resistor
Fast & Co.
Filtron Co., Inc.
GE, Apparatus Sales
General Radio Co.
Gudeman Co.
Hopkins Engrg. Co.
Industrial Condenser Corp.
Lectronic Res. Labs.
Mallory & Co., P. R.
Micamold Electronics
New Haven Clock
Newark Electric Co.
Pimex, Inc.
Plastic Capacitors, Inc.
Potter Co.
Pyramid Electric
Radiation Res. Corp.
San Fernando Electric
Sanders Assocs.
Sangamo Electric
Southern Electronics
Sprague Electric
Stackpole Carbon Co.
Texas Insts., Inc.
Tobe Deutschmann
U. S. Electr. Dev.
U. S. Gasket Co.
U. S. Instr. Corp.

CAPACITORS, Precision (0.01%)

AiResearch Mfg. Co.
Capcon Corp.
Chicago Condenser Corp.
Condenser Products
Cornell-Dubilier
Corson Electric Mfg.
Dearborn Electronic Labs.
DuMont-Airplane
Federal Telephone & Radio
General Radio Co.
Gudeman Co.
Hammarlund Mfg.
Industrial Condenser Corp.
JFD Mfg.
Johanson Mfg.
Leeds & Northrup
New Haven Clock
Potter Co.
Radiation Research
Research Instr. Co.
Sangamo Electric
Southern Electronics
Tobe Deutschmann Corp.
U. S. Electr. Dev. Corp.

CAPACITORS, Tantalum

Aerovox Corp.
Cornell-Dubilier
DuMont-Airplane
Fansteel Metallurgical
GE, Apparatus Sales
Intelex Systems
Mallory & Co., P. R.
Ohmite Mfg.
Sprague Electric

CAPACITORS, Vacuum

Amperex Electronics
Eitel-McCullough
GE
Grain Lab. Equipt.
Industrial Condenser Corp.
Jennings Radio Mfg.
National Co.
United Electronics Co.

CAPACITORS, Variable

Aerovox Corp.
Aircraft Radio
Anatran Engrg. Corp.
Arnhold Ceramics
Bud Radio
Cambridge Instr. Co.
Cambridge Thermionic
Cardwell Mfg. Corp.
Centralab Div.
Clarke Instr. Corp.
Clippard Instr. Lab.
Condenser Products
Corning Glass Works
Crystal Research Labs.
Dittmore & Freimuth
Eitel-McCullough
Endevco Corp.
Erie Resistor
Federal Telephone & Radio
GE, Apparatus Sales
General Radio
Hammarlund Mfg.
Harvey Radio Labs.
Insuline Corp. of Amer.
JFD Mfg.
Jennings Radio Mfg.
Johanson Mfg.
Johnson Co., E. F.
Kellogg Switchboard
Lapp Insulator
Leeds & Northrup
Mallory & Co., P. R.
McCoy Electronics
Measurements Corp.
Millen Mfg. Co.
National Co., Inc.
New Haven Clock
Newark Electric Co.
Oak Mfg. Co.
Radio Condenser Co.
Rubicon Co.
Sarkes Tarzian Inc.
Southern Elects. Corp.
Sprague Electric
United Condenser
Wilmar Mfg.

CAPACITORS, Vitreous Enamel

Cornell-Dubilier
Vitramon, Inc.

CAPACITY METERS, see Capacitance Indicators

CARBON DIOXIDE METERS, see Gas Analyzers

CARBON MONOXIDE METERS, see Gas Analyzers

CARBON PILES, see Resistors, Carbon Compression

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CASES, Instrument, Metal

Abalon Prec. Mfg.
Alden Products
Allied Engraving
Amer. Kloeckner-Moeller
Artisan Metal Works
Brooks & Perkins
Bud Radio
Bushnell Optical
Blickman, Inc., S.
Breeze Corporations
Bristol Co.
Chicago Indust. Instr.
Churchill Lighting
Clark Co.
Cleveland Wire Spring
Cooper Co., Clark
Craig Systems
Croname, Inc.
Dittmore & Freimuth
DuBois Engrg. & Mfg.
DuMont Labs., Allen
Eitzen Co., Louis C.
Electric Tachom. Corp.
Electro Chemical Engrg.
Ellis & Sons, George P.
Engrg. & Res. Corp.
Engis Equipt. Co.
Esterline-Angus
Falstrom Co.
Fischer & Porter Co.
Gadgets, Inc.
Garder Lab.
Gold Seal Mfg.
Grain Lab. Equipt.
Grammes & Sons
Hathaway Instr. Co.
Hunter Spring Co.
Instruments Inc.
Johnson Co., E. F.
Karp Metal Prods.
Keller Products
Kirk & Blum
Koehler Instr. Co.
Lewyt Corp.
Marine Compass Co.
Metal Craft Co.
Molded Insulation Co.
Moss & Co.
Newark Electric Co.
Par-Metal Prods.
Phaostron Co.
Pneumefil Corp.
Rapidan Mfg. Co.
Reiner Electronics
Riester & Thesmacher
Scovill Mfg.
Shallcross Mfg.
Simpson Electric
Suffolk Products
T. A. Mfg. Co.
Taylor Instr. Cos.
Tech. Material Corp.
Teletronics Labs., Inc.
Trerice Co., H. O.
Warwick Products
Weber Bros. Metl. Wks.
Wolfe & Mann
Zero Mfg.

CASES, Instrument, Molded including Rubber

Alteneder & Sons
Amer. Kloeckner-Moeller
Auburn Button Wks.
Bendix, Eclipse-Pioneer
Boonton Molding Co.
Breeze Corporations
Chicago Indust. Insts.
Chicago Mld. Prod.
Consoli. Molded Prods.
Continental-Diamond Fibre
Dynakon Corp.
Eby, Inc., Hugh H.
Erie Resistor
Felsenthal & Sons
Fischer & Porter
Gadgets, Inc.
GE
General Industries Co.
General Tire
Graton & Knight Co.
Grigoleit Co.
Imperial Molded Prods.
Koch & Sons
Kollsman Instr. Div.
Luzerne Rubber
Milsco Products
Molded Insulation Co.
Phaostron Co.
Regal Plastic Co.
Republic Rubber Div.
Richardson Co.
Rogan Bros.
Rohm & Haas
Scheidl Mfg. Co.
Stokes Rubber
Taylor Instr. Cos.
Valley-National
Waldon Electronics
Waterbury Cos.
Watertown Mfg.

CASES, Instrument, Wood (see also Cabinets)

Allied Engraving
Alteneder & Sons
Brit. Electronic Sales
Bushnell Optical
Daven Co.
Dittmore & Freimuth
Eitzen Co., Louis C.
Engis Equipt. Co.
Gadgets, Inc.
Gordon Enterprises
Grain Lab. Equip.
Gurley, W. & L. E.
Keller Products
Koehler Instr. Co.
Laboratory Furniture Co.
Lab. of Electronic Engrg.
Magnecord Inc.
Marine Compass Co.
Phaostron Co.
Rueckert Mfg.
Scientific Wood Cab. Co.
Sierra Electronic
Statolet Corp.
Taylor Instr. Cos.
Warwick Products
Wolff Woodcraft Corp.

CASES, Leather

Alteneder & Sons
Apex Specialties Co.
Auburn Mfg. Co.
Bausch & Lomb
Bushnell Co., D. P.
Chicago Indust. Insts.
Daniels, Inc.
Garlynn Engrg. Co.
Gordon Enterprises
Graton & Knight
Hugo Bosca Co.
Kellogg Switchboard
Magnecord Inc.
Milsco Mfg.
Moss & Co.
Rueckert Mfg.
Simpson Electric
Statolet Corp.
Warwick Products

CASES, Weatherproof

Adalet Mfg.
Blossom Mfg.
Bristol Co.
Craig Systems
Daniels, Inc.
Dittmore & Freimuth
Falstrom Co.
Graton & Knight
Instruments, Inc.
Karp Metal Prods. Co.
Kirk & Blum
Koch & Sons
Metal Craft Co.
Rapidan Mfg. Co.
Regal Plastic Co.
Reiner Electronics
Riester & Thesmacher
Swanson Engrg. Co.
Taller & Cooper, Inc.
Tech. Material Corp.
Warwick Products
Watertown Mfg.
Zero Mfg.

CASING, Flexible

Arens Controls Inc.
Barbour Stockwell
Bel-Art Products
Breeze Corporations
Chicago Metal Hose
Flexonics Corp.
Fulton-Sylphon Div.
Penna. Flex. Metallic
Scheidl Mfg. Co.
Stewart Corp.
Stow Mfg.
Universal Metal Hose
White Dental Mfg.

CATHETOMETERS

Askania-Werke, A. G.
Cambridge Instr. Co.
Central Scientific
Dietert Co.
Eberbach Corp.
Eberbach & Sons
Engis Epuipt. Co.
Ferner Co.
Gaertner Scientific
Henson Co.
Indust. Scientific
Inseo Company
Jarrell-Ash
Mico Instr. Co.
National Instr. Labs.
Unertl Optical Co.
Welch Mfg. Co., W. M.
Wild Heerbrugg

CATHODE RAY TUBES, see Tubes, Cathode Ray

CELLS, Conductivity, see Conductivity Cells

CELLS, Heat Sensing, see Conductivity Cells, Thermal

CELLS, Kerr, see Kerr Cells

CELLS, Load, Tension, Compression, see Load Cells

CELLS, Photoelectric, see Photoelectric Cells

CELLS, Standard, see Standard Cells

CEMENT APPARATUS, see Concrete and Cement Test

CEMENT, Optical

Amer. Optical
Bakelite Div.
Bausch & Lomb
Benjamin & Assoc., L.
Biggs Co.
Carbide & Carbon
Eastman Kodak
Edna Lite Optical
Emerson & Cuming, Inc.
Fish-Schurman
Jadow, Inc.
Lab. Optical
Marshall Co.
Optical Film
Palos Optical
Rohm & Haas
Unertl Optical
Zophar Mills, Inc.

CEMENT, Special

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Armstrong Cork
Bakelite Div.
Bar-Ray Products
Biggs Co.
Borden Co.
Carbide & Carbon
Central Scientific
Continental-Diamond Fibre
Continental Rubber Wks.
DuPont
Durez Plastics
Durite Plastics
Eastern Prec. Resistor
Emerson & Cuming
General Cement Mfg.
Goodrich Co., B. F.
L. & R. Mfg. Co.
Lab Optical
Maas & Waldstein Co.
Marshall Co., C. & E.
Micro-Circuits Co.
Minnesota Mining & Mfg.
Monsanto Chemical
Newall Mfg.
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U. S. Rubber
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Ann Arbor Instr. Works
Bowen & Co.
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Fisher Scientific
Humboldt Mfg.
Indust. Scientific
Olsen Testing Machine
Pacific Scientific
Precision Scientific
Soiltest, Inc.
Standard Concrete App.

CEMENT NEEDLE APPARATUS

Amer. Instr. Co.
Central Scientific
Fisher Scientific
General Cement Mfg.
Humboldt Mfg.
Indust. Scientific
Olsen Testing Machine
Pacific Scientific
Precision Scientific
Soiltest, Inc.
Zenith Mfg. & Chem.

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Ford Motor Co.
Howard Clock
Willey's Carbide Tool Co.

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Centrico, Inc.
Clay-Adams, Inc.
Coleman Engrg. Co.
Custom Scientific Insts.
Fisher Scientific
Genisco, Inc.
Glass Engg. Labs.
Greiner, Emil
Griner Co., A. J.
Haines Designed Prods.
Hycon Mfg.
Indust. Scientific
Instrumentation Assoc.
Labline, Inc.
Microchemical Service
Phillips-Drucker
Phipps & Bird
Podbielniak, Inc.
Precision Scientific
Sargent & Co.
Schaar & Co.
Sorvall, Inc.
Specialized Insts. Corp.
Spinco Div.
Technical Prods. Co.
Warren Bros. Mfg. Co.
Williams App. Co.

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Boekel & Co.
Central Scientific
Eitzen Co.
Greiner, Emil
Instrumentation Assoc.
Labline, Inc.
Moeller Instr. Co.
Owens Illinois
Podbielniak, Inc.
Precision Scientific
Refinery Supply
Sargent & Co.
Schaar & Co.
Westinghouse Electric
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Fischer Scientific
Genisco, Inc.
Hycon Electronics
Instrumentation Assoc.
Internat. Res. & Dev.
Microchemical Specialties
Precision Scientific
Schaar & Co.
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Spinco Div.
Warren Bros. Mfg. Co.

CERAMIC INSULATION PARTS, see Bushings, Non-metallic

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Dillon & Co.
Emery Co.
Fairbanks, Morse & Co.
Hacker & Co.
Krouse Testing Machine
Olsen Testing Machine
Riehle Div.
Steel City Testing Machines
Testing Machines, Inc.

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Sierra Engrg. Co.

CHAINS, SURVEYORS, see Surveying Instruments

CHAMBERS, IONIZATION, see Ionization Chambers

CHAMBERS, Test and Calibration, see Environmental Test Chambers

CHANGERS, Frequency, see Frequency Changers

CHANGERS, Voltage, see Voltage Changers

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Engineers Specialty Div.
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Hirschmann Co.
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Nikon, Inc.
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Opto-Metric Tools
Mason Instr. Co.
Pan-Technics, Ltd.
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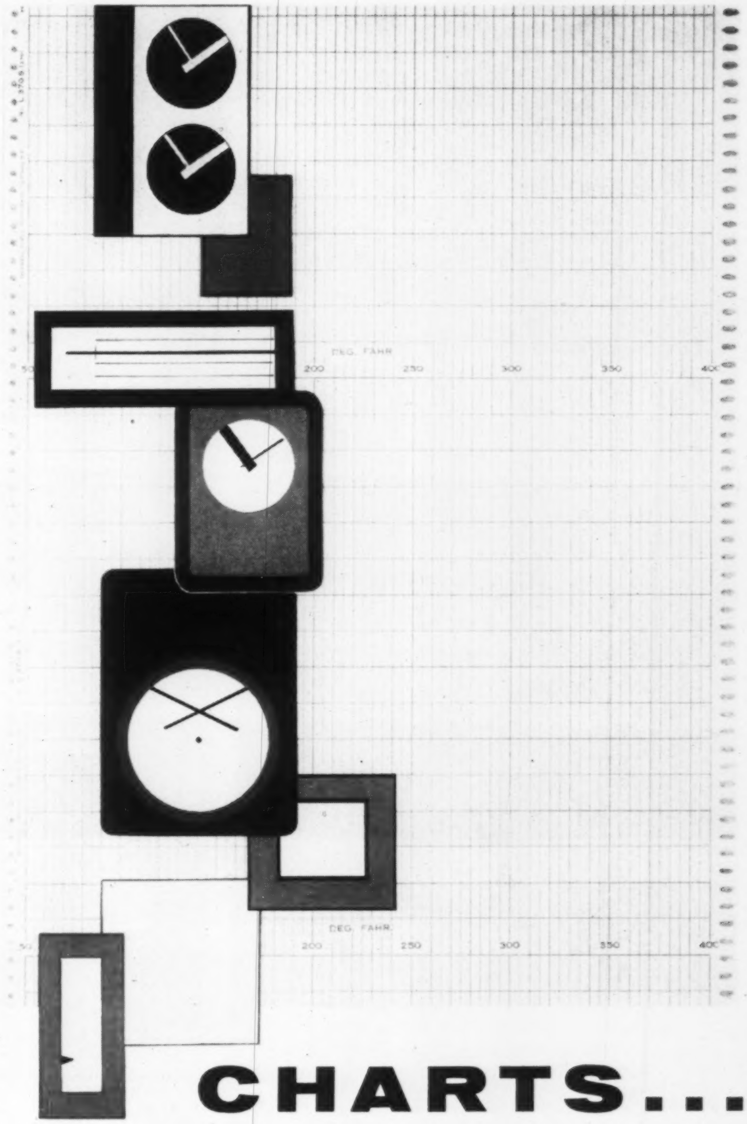

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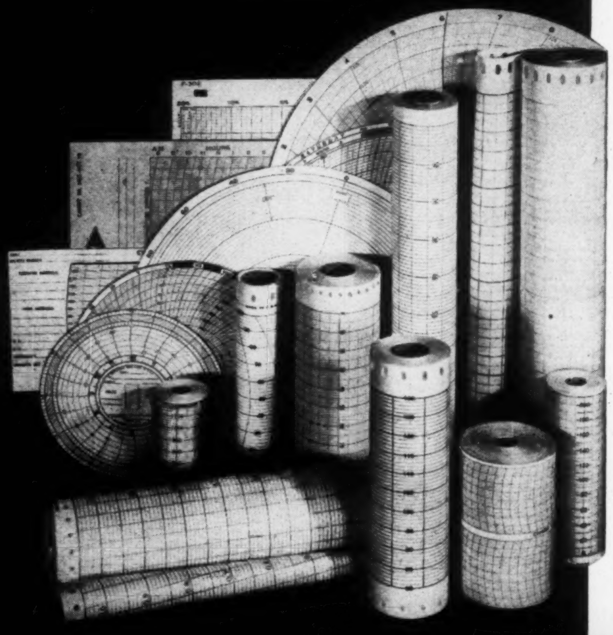

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Gorrell & Gorrell
Judson-Bigelow
Mine Safety Appliances
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Thermco Labs.
Warren Bros. Mfg. Co.
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CHEMICAL COMPOSITION RECORDERS, see Analytical Instruments

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Swanson Engrg. Co.
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Infilco
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Little, Arthur D.
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CHOKES, see Ractors

CHOPPERS, DC-AC, see Converters, Vibrator, DC-AC

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Geotechnical Corp.
Gordon Enterprises
Potter Instr. Co.
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Systron Corp.
Stoelting Co.

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Aero Electronics
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Cal-Tronics Corp.
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Cincinnati Clock
Dale Instruments
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Desco Mfg.
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Electronic Devel. Lab.
Electrosig Corp.
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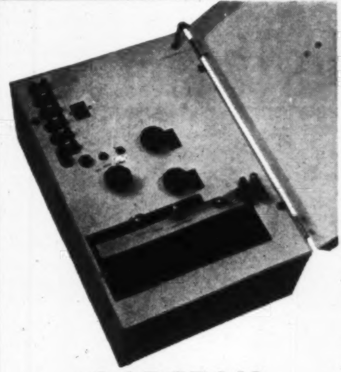

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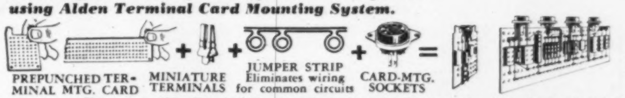

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YOUR COMPLETED CIRCUITS FOR PLUG-IN PACKAGE OR CHASSIS

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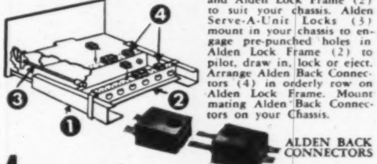
2. To mount this vertical circuitry, ALDEN PLUG-IN PACKAGES AND CHASSIS give tremendous variety with standard components

ALDEN PLUG-IN PACKAGE
4 SIZES: 7, 9, 11, & 20-PIN
ALDEN BASIC CHASSIS
4 SIZES:
2"
4"
8"
17"

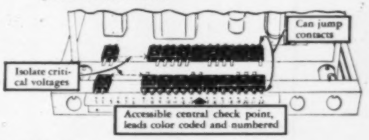
Alden components provide standard plug-in or slide-in housings—with spares, your circuits become units replaceable in 30 seconds.

3. Give chassis easily traceable interconnects and 30-second replacement with ALDEN SERVE-A-UNIT KIT

IT'S AS SIMPLE AS THIS Arrange Alden Side Rails (1) and Alden Lock Frame (2) to suit your chassis. Alden Serve-A-Unit Locks (3) mount in your chassis to engage pre-punched holes in Alden Lock Frame (2) to pilot, draw in, lock or eject. Arrange Alden Back Connectors (4) in orderly row on Alden Lock Frame. Mount mating Alden Back Connectors on your Chassis.



GIVING YOU 1) Chassis that plugs in, locks and ejects with half turn of the wrist. 2) leads so beautifully organized, accessible and identified that non-technical personnel can service.



Can jump contacts
Isolate critical voltages
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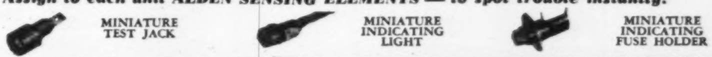
4. ***Assign to each unit ALDEN SENSING ELEMENTS — to spot trouble instantly:***



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Sticht Co., Herman H.
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Electronic Devel. Lab.
Electronic & Engrg. Serv.
Electronic Instr. Co.
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Fed. Telephone & Radio
Feller Engrg. Co.
Freed Transf. Co.
GE
Gates Electronic Co.
General Cement Mfg.
General Electronic
General Test. Equipt.
Geotechnical Corp.
Gordon Enterprises
Gray Instr. Co.
Hewlett-Packard
Hickok Electcl. Instr.
Hoover Electronics
Hycon Mfg.
I-L-S Instr. Corp.
Ideal Industries
Indust. Test Equipt. Co.
Instrument Laboratories
Jackson Electcl. Instr.
Jordan Electronics
Kahn & Co.
Kay Electric
Kearfott (Western)
Kellogg Switchboard
Kepco Labs.
Lear, Inc.
Leeds & Northrup
Littlefuse, Inc.
Lyman Electronic
MacLeod & Hanopol
Magnetic Instr. Co.
Marconi Instruments
Martindale Electric
Measurements Corp.
Meters, Inc.
Millivac Instruments
Nelson Electric Mfg.
Newark Electric Co.
Norden Instruments
Northrop Anaheim
Opad Electric
Pacific Instr. Co.
Penn Optical & Instr.
Peschel Electronics
Phaostron Co.
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Radex Corp.
Radiaphone Co.
Radio Frequency Labs.
Radio City Prods. Co.
Raytheon Mfg.
RCA
Reiner Electronics
Roller-Smith
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Seco Mfg. Co.
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Sherron Metallic Corp.
Simpson Electric
Sittler Corp.
Slaughter Co.
Sperry Gyroscope
Stitcht & Co., Herman
Sun Electric
Supreme, Inc.
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Tarc Electronics
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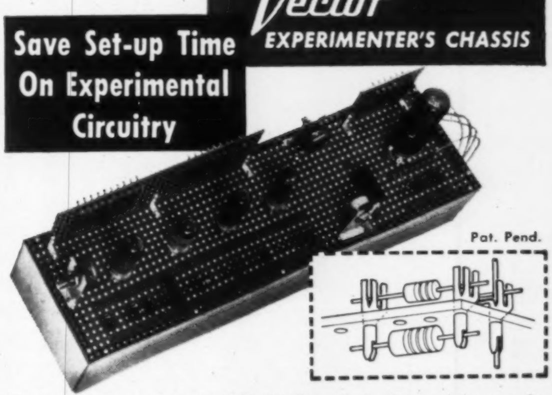
Vector EXPERIMENTER'S CHASSIS

Save Set-up Time On Experimental Circuitry



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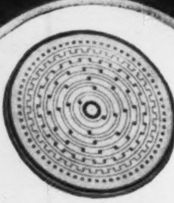

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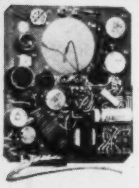

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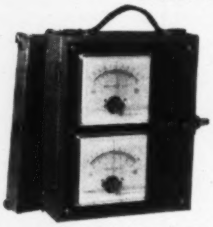

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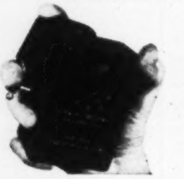

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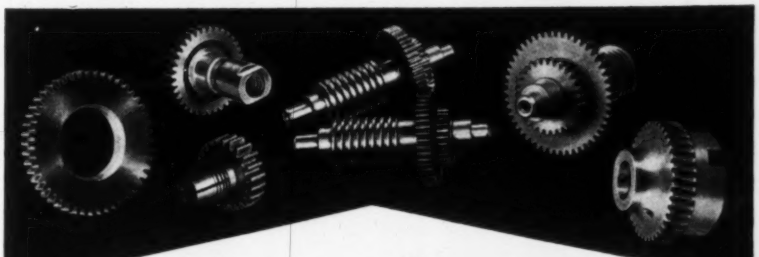

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Owens-Illinois
Phoenix Prec. Instr.
Porter, George K.
Prec. Glass Prods.
Smith Co., Arthur F.

COCKS, Metal

Accessory Prods. Corp.
Conant Bros. Co.
Continental-Diamond Fibre
Dole Valve Co.
Hays Mfg. Co.
Hubbell Metals
Jerguson Gage
Parker Appliance Co.
Precision Scientific
Stafford Co.
Steel Co., Herman D.
Trerice Co.
Vacuum Electronics Engrg.
Weatherhead Co.
Weksler Thermom. Corp.
Westinghouse Air Brake Co.

CODE DISCS

Airflyte Electronics
Librascope, Inc.

CODING EQUIPMENT, see Telegraphy

COHESION TESTING MACHINES, Silk and Rayon, see Silk and Rayon Test Instruments

COIL FORMS, Ceramic and/or Plastic

Alden Products
Amer. Phenolic Corp.
Caddell-Burns
Cambridge Thermionic
Centralab Div.
Continental-Diamond Fibre
Corning Glass Works
Crane Packing Co.
Eastern Prec. Resistor
Electronic Mechanics, Inc.
Ford Instr. Co.
Formica Co.
Garde Mfg.
General Ceramics
GE
General Transf. Co.
General Winding Co.
Grayhill, Inc.
Gries Reproducer Corp.
Insuline Corp. of Amer.
Insulation Mfrs. Corp.
Johnson Co., E. F.
Kearfott Co., Inc.
Micalex Corp. of Amer.
Millen Mfg. Co.
Molded Insulation Co.
Mycalex Corp. of Amer.
National Co.
Newark Electric Co.
North Hills Electric
Osborne Electric Co.
Polymar Corp.
Prec. Paper Tube Co.
Printloid, Inc.
Rex Corp.
Richardson Co.
Rogan Bros.
Saxonburg Ceramics
Shallcross Mfg.
Spaulding Fibre Co.
Speer Carbon Co.
Stackpole Carbon Co.
Steatite Div.
Steward Mfg. Co.
Stone Paper Tube Co.
Stupakoff Div.
Superex Electronics
Superior Steatite
Telex, Inc.
Thermo Materials, Inc.
Thordarson-Meissner
U. S. Gasket Co.
U. S. Stoneware Co.
United States Electronics
Viking Electric
Waterbury Co's
Watertown Mfg.

COIL TESTING EQUIPMENT

Assoc. Research Inc.
B & K Mfg.
Biddle Co., James
Boonton Radio Co.
California Magnetic
Chicago Indust. Instr.
Clippard Instr. Lab.
Clough-Brengle
Columbia Technical Corp.
Daystrom Instrument
Diatron Co.
Eastern Prec. Resistor
Electronic Instr. Co.
Fed. Telephone & Radio
Feiler Engrg. Co.
Freed Transf. Co.
GE, Apparatus Sales
General Electronic
General Radio
Ideal Industries
Industrial Insts., Inc.
Indust. Test Equipt.
Instrument Labs.
Kahn & Co.
Kay Electric
Kellogg Switchboard
Leeds & Northrup
Magnetic Instr. Co.
Martindale Electric
North Hills Elect. Co.
Pacific Instr. Co.
Panoramic Radio Co.
Radex Corp.
Radio City Products
Reiner Electronics
Rubicon Co.
Schauer Mfg.
Seco Mfg. Co.
Shallcross Mfg. Co.
Sherron Metallic Corp.
Sun Electric
Sunshine Scientific
Technology Instr. Div.
Thordarson-Meissner
United Optical
United Transf. Corp.

COIL WINDING MACHINES, see Machines, Coil Winding

COILS RF and IF

Aerolite Electronics
Aerovox Corp.
Airmax Products
All-Tronics, Inc.
Atlas Engrg. Co.
Avion Div.
Boonton Radio
Bud Radio
Caddell-Burns
Calif. Magnetic Cont. Corp.
Cambridge Thermionic
Carad Corp.
Corning Glass Works
Dietz Design & Mfg.
Dittmore & Freimuth
DuMont Labs., Inc., Allen
Eastern Prec. Resistor
Essex Electronics
Filtron Co., Inc.
General Instr. Co.
Gordos Corp.
Goslin Electric
Gramer Transformer
Gudeman Co.
Hansen Electronics
Houlihan Co.
Johnson Co., E. F.
Magnavox Co.
Magnetic Instr. Co.
Mallory & Co., P. R.
Millen Mfg. Co.
Munston Mfg. & Service
National Co.
Natl Aircraft Corp.
Newark Electric Co.
North Hills Electric
Ohmite Mfg. Co.
Osborne Electric
Polyphase Instr. Co.
Raypar, Inc.
Sickles Div.
Speer Carbon Co.
Superex Electronics
Sylvania Electric Prods.
Tech. Material Corp.
Tri-Dex Electronics
United States Electronics
Virginia Electronics
Waters Mfg.
Wirt Co.

COILS, Toroidal

Aerolite Electronics
Aerovox Corp.
Airpax Products
AiResearch Mfg. Co.
Alden Products
Arnold Magnetics Co.
Atlantic Transf. Div.
Atlas Engrg. Co.
Avion Div.
Basler Electric
Brit. Electronic Sales
Burnell & Co.
Caledonia Electronics
Carad Corp.
Cedar Engrg., Inc.
Chicago Standard Trans.
Colin Campbell Co.
Communication Access. Co.
Control Components Co.
D & R Limited
Dietz Design & Mfg.
Dittmore & Freimuth
DuMont Labs., Allen B.
Dynamics Res. Assoc.
Ford Instrument
Freed Transformer
General Instrument
Goslin Elect. & Mfg. Co.
Gramer-Halldorson Transf.
Harder Co., Donald C.
Houlihan Co.
Hycor Co., Inc.
Jeffries Transf. Co.
Kearfott Co.
Keystone Products
Lenkurt Electric
Litton Ind. of Md.
Magnavox Co.
Magnetic Instr. Co.
Magnetic Res. Co.
Magnetic Specialties
Mechaponents Div.
Mico Instr. Co.
National Co.
Natl. Aircraft Corp.
New York Transformer
Norden-Ketay Corp.
North Hills Elect.
Osborne Electric
PCA Electronics
Polyphase Instr. Co.
Pulse Engrg., Inc.
Raypar, Inc.
Raytheon Mfg. Co.
Sickles Div.
Southw. Indust. Electronics
Standard Electronics Co.
Std. Electric Prods.
Tech. Material Corp.
Thermador Elect. Mfg.
Torwico Electronics
Texas Insts., Inc.
Tobe Deutschmann Corp.
Transformers, Inc.
Transmag Div.
Triad Transf. Corp.
Tri-Dex Electronics
United States Electronics
United Transf. Corp.
Vari-L Co., Inc.
Virginia Electronics
Wang Labs.
Waters Mfg.
Wheeler Insul. Wire

COILS, Transformer

Acme Wire Co.
Aerovox Corp.
AiResearch Mfg.
Airpax Products
All-Tronics, Inc.
Altec Lansing
Amplifier Co. of Amer.
Atlantic Transf. Div.
Atlas Engrg. Co.
Avion Div.
Basler Elect.
Better Coil & Trans.
Cambridge Thermionic
Carad Corp.
Caledonia Electronics
Calif. Magnetic Cont. Corp.
Carol Electronics
Chicago Std. Transf. Corp.
Clippard Instr. Lab.
Comar Electric
Communications Access.
Control Components Co.
Cooper Co., Clark
Dano Electric
Del Electronics Co.
Dietz Design & Mfg.
Dinion Coil Co.
Dittmore & Freimuth
Dormeyer Industries
Durakool, Inc.
Eastern Specialty Co.
Edwards Co., Inc.
Electrical Windings
Electricoil Transf.
Electronic Transf. Co.
Essex Wire Co.
Ferranti Electric
Filtron Co., Inc.
Freed Transf. Co.
Gordos Corp.
Goslin Electric
Gramer-Halldorson Transf.
Green Rectifier Co.
Harder Co., Donald C.
Harris Co., Arthur
Hevi-Duty Electric
Hycor Div.
Indust. Rectifier Devices
James Vibrapowr Co.
Jeffries Transf. Co.
Lenkurt Electric
Magnatran Inc.
Magnavox Co.
Magnetic Instr. Co.
Mechaponents Div.
Merit Transf. Corp.
Mt. Sopris Instr. Co.
Munston Mfg. & Service
NYT Electronics
Natl. Aircraft Corp.
New York Transformer
Nothelfer Winding Labs.
North Hills Electric
Osborne Electric Co.
P. C. A. Electronics
Polyphase Instr. Co.
Pulse Engrg., Inc.
Ransom Research
Raypar, Inc.
Reed & Reese
Small Motors, Inc.
Sorensen & Co.
Southw. Indust. Electronics
Specialties, Inc.
Spellman Television
Std. Electrical Prods.
Sterling Transf. Corp.
Sylvania Elec. Prods.
Tech. Material Corp.
Telex, Inc.
Texas Insts., Inc.
Thermador Elect. Mfg. Co.
Thordarson-Meissner
Torwico Elects., Inc.
Transvision, Inc.
Triad Transf. Corp.
Tri-Dex Electronics
United States Electronics
United Transf. Corp.
Universal X-Ray Prods.
Virginia Electronics
Waters Mfg.
Westinghouse Electric
Wheeler Insul. Wire
Wirt Co.

COIN OPERATED DEVICES

Commercial Controls
Kopp Scientific
Rhodes, Inc.
Transvision, Inc.

COLLIMATORS, Vertical

Amer. Optical
Berger & Sons
Brunson Instr.
Davidson Mfg. Co.
Dusenbery Co.
Edmund Scientific
Engis Equipt. Co.
Fecker, Inc.
Fish-Schurman
Gaertner Scientific
Garlynn Engrg. Co.
Georator Corp.
Gordon Enterprises
Jacobs Instr. Co.
Kollmorgen Optical
Laboratory Optical
Lindly & Co.
Link Aviation Devices
Los Angeles Scientific
Meyer-Opticraft
Nife Inc.
Norden-Ketay
Palos Optical
Pan-Technics, Ltd.
Perkin-Elmer
Phoenix Prec. Instr.
QOS Corp.
Stocker & Yale
Tinsley Labs.
Unertl Optical
White Co. Inc.
Wild Heerbrugg
Zoomar Corp.

COLOR ANALYZERS and COMPARATORS, Photoelectric

Allied Engrg. Div.
Amer. Electronic Labs.
Amer. Optical
Ansco
Applied Research Labs.
Avion Div.
Axler Associates
Bausch & Lomb
Beckman Div.
Beckman Instrs.
Berkshire Labs.
Central Scientific
Coleman Insts.
Dearborn Scientific
De-Tec-Tronic Labs.
Electric Sorting Mach. Div.
Electronic Control Corp.
Ercona Corp.
Ess Instr. Co.
Farrand Optical
Fish-Schurman
Fisher Scientific
Gaertner Scientific
Gardner Laboratory
G.E., Apparatus Sales
General Radio
Greiner, Emil
Hallikainen Instruments
Hellige, Inc.
Huggins Labs.
Instrument Devel. Labs.
Jacobs Instr. Co.
Jarrell-Ash
Kaye Dev. Co.
Klett Mfg. Co.
Laboratory Optical
Lafayette Instr. Co.
Librascope Inc.
Macbeth Corp.
Madison Elect. Prods.
Meyer-Opticraft
Neutronics Research
Perkin-Elmer Corp.
Pfaltz & Bauer
Phoenix Prec. Instr. Co.
Photo Res. Corp.
Photobell Co.
Photoswitch, Inc.
Photovolt Corp.
Precise Measurements
Process & Instruments
Rawson Elect. Instr.
Rubicon Co.
Tarc Electronics Inc.
Telechrome, Inc.
Testing Machines, Inc.
Wallace & Tiernan
Welch Mfg. Co., W. M.
Westinghouse Electric
Willmotte, Inc.
Zeiss, Inc., Carl

COLOR COMPARATORS, Visual

Allied Engrg. Div.
Atlas Electric Devices
Austin Co.
Baird-Atomic
Bausch & Lomb
Central Scientific
ConRay Corp.
Electric Eye Equipt.
Electric Sorting Machine
Ercona Corp.
Fisher Scientific
Fish-Schurman
Gaertner Scientific
Gardner Laboratory
Greiner, Emil
Hallikainen Instruments
Hausser & Son
Hellige, Inc.
Huggins Labs.
Instrument Devel. Labs.
International Devel. Co.
Jackson Electcl. Instr.
Jarrell-Ash
Kay Electric
Kaye Devel. Co.
Klett Mfg.
Koehler Instr. Co.
Kollmorgen Optical
Laboratory Optical
LaMotte Chemical Prods.
Librascope, Inc.
Macbeth Corp.
Menlo Research Lab.
Munsell Color Co.
Penn Optical & Instr.
Phipps & Bird
Phoenix Prec. Instr.
Photovolt Corp.
Precise Measmts. Co.
Rascher & Betzold
Shasta Div.
Sheffield Corp.
Stoelting Co.
Swedish Gage
Taylor & Co., W. A.
Telechrome, Inc.
Testing Machines, Inc.
Wallace & Tiernan
Westinghouse Electric
Weston Electcl. Instr.
Zeiss, Inc., Carl

COLOR STANDARDS, see Standards, Color

COLORIMETER TUBES, see Colorimeters, Visual

COLORIMETERS, Photoelectric

Allied Engrg. Div.
Amer. Instr. Co.
Associated Research
Bausch & Lomb
Beckman Div.
Beckman Instrs.
Berkshire Labs.
Biddle Co., James G.
Brinkmann & Co.
Central Scientific
Clay-Adams
Coleman Instruments
Dearborn Scientific
De-Tec-Tronic Labs.
Electric Eye Equipt.
Epic Inc.
Ercona Corp.
Farrand Optical
Fish-Schurman
Fisher Scientific
Gardner Laboratory
Greiner, Emil
Hallikainen Instruments
Hellige, Inc.
Huggins Labs.
Instrumentation Assoc.
Instrument Devel. Labs.
Jarrell-Ash Co.
Kaye Devel. Co.
Klett Mfg. Co.
Kruger Instruments
Leitz, Inc.
Macbeth Corp.
Mass Instruments
Meyer-Opticraft
Mfrs. Engrg. & Equip.
Munsell Color
Phoenix Prec. Instr.
Photovolt Corp.
Photron Instr. Co.
Process Instruments

Rubicon Co.
Scientific Glass App.
Specialties, Inc.
Technical Prods. Co.
Telechrome, Inc.
United Optical
Wilkens-Anderson
Will Corp.
Zeiss, Inc., Carl

COLORIMETERS, Visual

Allied Engrg. Div.
Amer. Instr. Co.
Amer. Optical
Bausch & Lomb
Bellco Glass Inc.
Central Scientific
Coleman Instr. Co.
Ercona Corp.
Fischer & Porter Co.
Fish-Schurman
Fisher Scientific
Gardner Laboratory
Greiner Co., Emil
Hausser & Son
Hellio Instr. Co.
Hellige, Inc.
Instrument Devel. Labs.
International Devel. Co.
Jarrell-Ash
Klett Mfg.
Koehler Instr. Co.
Kollmorgen Optical
Kontes Glass Co.
Labline, Inc.
La Motte Chem. Prod.
Macbeth Corp.
Munsell Color Co.
Opplem Co.
Phoenix Prec. Instr.
Precise Measmts. Co.
Precision Scientific
Rascher & Betzold
Taylor & Co., W. A.
Technical Prods. Co.
Weston Electcl. Instr.
Zeiss, Inc., Carl

COLUMBIUM

Belmont Smelt. & Ref.
Fansteel Metallurgical

COLUMNS, Ion Exchange, see Ion Exchange Columns

COMBUSTION CONTROL EQUIPMENT (see also Boiler Room Instruments, also Furnace Control)

Askania Reg. Co.
Assembly Products
Bailey Meter Co.
Barber-Colman
Beckman Div.
Bristol Co.
Burrell Corp.
Cambridge Instr. Co.
Cash Co., A. W.
Cleveland Fuel Equipt.
Combustion Control Corp.
Continental Foundry
Copes Vulcan Div.
Cutler-Hammer
Davis Emergency Equipt.
Defender Instr. & Reg.
De-Tec-Tronic Corp.
Eclipse Fuel Engrg. Co.
Electron-Radar Prods.
Electronic Prods. Co.
Electronics Corp. of Amer.
Ellison Draft Gage Co.
Engelhard, Inc., Chas.
Ess Instr. Co.
Fischer & Porter Co.
Fisher Governor
Foster Engrg. Co.
Foxboro Co.
Furst Electronics
Genl. Regulator Corp.
General Controls Co.
G E, Apparatus Sales
General Regulator Corp.
Gordon Co., Claud S.
Hagan Chem. & Controls
Hammel-Dahl
Hays Corp.
Heat-Timer Corp.
Jo-Bell Products
Lake Erie Electric
Larson Instr.
Leeds & Northrup
Mason-Neilan Div.
Mercoid Corp.
Mine Safety Appliances
Minneapolis-Honeywell
Moore Products
National Brass Co.
Natural Gas Equipt.
Orban Co., Kurt
Partlow Corp.
Perfex Div.
Controls Div.
Reliance Instr. Mfg.
Republic Flow Meters
R.K.L. Valve & Mfg. Co.
Selas Corp.
Shallcross Controls
Smok-Trol Corp.
Soreng Products
Surface Combustion Corp.
Taller & Cooper, Inc.
Taylor Instr. Cos.
Thermco Labs.
Victory Engrg. Corp.
Wheelco Instr. Div.
Worner Electronic Devices

COMBUSTION INDICATORS and/or RECORDERS, see Boiler Room Instruments, also Gas Analyzers

COMBUSTION SAFEGUARDS, including Flame Failure

Assembly Products
Barber-Colman
Baso Inc.
Bristol Co.
Diamond Power Spec. Corp.
Dietz Co., Henry G.
Eclipse Fuel Engrg. Co.
Electron-Radar Prods.
Electronic Control Corp.
Electronics Corp. of Amer.
Ess Instr. Co.
GE Apparatus Sales
General Controls Co.
Larson Instr. Co.
Mercoid Corp.
Minneapolis-Honeywell
Partlow Corp.
Photo Crystals, Inc.
Selas Corp. of Amer.
Worner Elects. Devices

COMMUNICATION MEASURING INSTRUMENTS

Adler Electronics
Aircraft Radio
Alden Electronic
Alden Products
All-Tronics, Inc.
Alto Scientific
Amer. Electroneering
Amer. Mach. & Foundry
Amplifier Co.
Ark Engrg.
Automatic Electric
Avion Div.
BJ Electronics
Ballantine Labs.
Boonton Radio
Brunswick Instruments
Brush Electronics
Burlington Instr. Co.
Cal-Tronics Corp.
Clarke Instr. Corp.
Clegg Labs., Inc.
Clough-Brengle
Communications Meas. Lab.
Dale Instruments
Daven Co.
Daystrom Instrument
Donner Scientific
D & R Limited
Elect. Indicator Co.
Electric Des. & Mfg.
Electronic Assocs.
Electronic Devel. Lab.
Electronic Tube Corp.
Empire Devices Prod.
Esterline-Angus
Federal Telephone & Radio
Feiler Engrg. Co.
Ferris Instr. Corp.
Freed Transf. Co.
GE
General Radio
Hammarlund Mfg.
Harvey Radio Labs.
Henschel Corp.
Hewlett-Packard
Hickok Electcl. Instr.
Hycon Mfg. Co.
Industrial Inst. Co
Kahn & Co.
Kaiser Aircraft & Elect.
Kay Electric
Kellogg Switchboard
Leeds & Northrup
Lenkurt Electric
Manson Labs.
Marconi Instruments
Measurements Corp.
Microphase Corp.
Millen Mfg. Co.
Muirhead Instrument
Nems-Clarke, Inc.
New London Instr. Co.
Pacific Instr. Co.
Precision App. Co.
Premier Crystal Labs.
Radio City Products
Radio Frequency Labs.
Raypar, Inc.
Raytheon Mfg. Co.
RCA Div.
Rubicon Co.
Scott, Inc., Hermon H.
Sensitive Research Instr.
Servo Corp. of Amer.
Shallcross Mfg
Sherron Metallic Corp.
Sierra Electronic
Simpson Electric Co.
Sound Apparatus
Sperry Gyroscope
Stafford Co.
Stelma, Inc.
Sylvania Elect. Prods.
Technology Instr. Div.
Thordarson-Meissner
Trimount Instr. Co.
Triplett Elect. Instr.
United Optical Mfg.
Vapor Recovery Systems
Vectron, Inc.
Virginia Electronics
WacLine, Inc.
Wang Labs. Inc.
West Coast Electronics
Westinghouse Electric
Weston Electcl. Instr.

COMMUTATORS, Including Collector Rings

Airflyte Electronics
AiResearch Mfg. Co.
Autron Engrg.
Daven Co.
Electro-Miniatures
Electro Tec. Corp.
Gibson Electric Co.
Graphik Circuits, Div.
Instrument Dev. Labs.
Northam Electronics
Photocircuits Corp.
Poly-Scientific Corp.

COMPARATOR GAGES, see Dimensional Gages, Pneumatic, etc.

COMPARATORS, Electrical Resistance, see Resistance Comparators

COMPARATORS, Mechanical, see Dimensional Gages, Mechanical

COMPARATORS, Optical, see Dimensional Gages, Optical

COMPARATORS, Surface Finish, see Dimensional Gages, Surface Finish

COMPARATORS, Voltage, see Voltage Comparators

COMPASSES, Aircraft

Aircraft Radio
Airpath Instr. Co.
Arma Div.
Autoflight Inst. Div.
Bendix, Eclipse-Pioneer
Borg. Corp.
Electro-Mec. Lab.
Elgin Natl. Watch
Flight Research Eng.
GE, Apparatus Sales
Giannini & Co.
Hull Mfg.
Instr. Assocs.
Kearfott Co.
Koehler Instr. Co.
Kollsman Instr. Corp.
Marine Compass
Matisa Equipt. Corp.
Moisture Register Co.
Norden-Ketay
RCA Div.
Sperry Gyroscope
Star Compass Co.
Summers Gyroscope
Suverkrop Instruments
U. S. Gauge Div.

COMPASSES, Automobile

Arma Div.
Amer. Thermo Ware Co.
Hull Mfg.
Marine Compass Co.
Star Compass Co.
Thermometer Corp.
U. S. Gauge Div.

COMPASSES, Azimuth

Abrams Instr. Co.
Ainsworth & Sons
Arma Div.
Belock Instr.
Bendix Aviation Corp.
Berger & Sons
Brunson Instr. Co.
Dusenbery Co.
G E, Apparatus Sales
Garlynn Engrg. Co.
Gurley, W. & L. E.
Hopp Press
Kearfott Co.
Keuffel & Esser
Kollsman Instr. Co.
Leupold & Stevens
Los Angeles Scientific
Marine Compass Co.
Negus, T. S. & J. D.
Norden-Ketay
Pioneer Instr. Co.
Ritchie & Son
Summers Gyroscope
Suverkrop Instruments
Taylor Instr. Cos.
Warren-Knight
Wild Heerbrugg

COMPASSES, Dip

Dusenbery Co.
Garlynn Engrg. Co.
Gurley, W. & L. E.
Keuffel & Esser
Marine Compass Co
Los Angeles Scientific
Post Co.
Ruska Instr. Corp.
Sprengnether Instr.
Suverkrop Instruments
Taylor Instr. Cos.
Warren-Knight
Welch Mfg. Co., W. M.

COMPASSES, Drafting Room, see Drawing Instruments

COMPASSES, Gyro

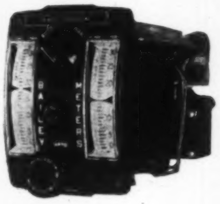
Aircraft Radio
Arma Div.
Belock Instr.
Bendix, Eclipse-Pioneer
Daystrom-Pacific
Flight Research Eng.
GE, Apparatus Sales
Instr. Associates
Kearfott Co.
Lear Inc.
Norden-Ketay
Pacific Scientific
Sperry Gyroscope
Summers Gyroscope
Vectron, Inc.

COMPASSES, Luminous Prismatic

Brunson Instr. Co.
Can. Rad. & Uran.
Dietzgen Co.
Kollsman Instr. Co.
Marine Compass Co.
Ritchie & Son
Scope Instr. Corp.
Suverkrop Instruments
Taylor Instr. Cos.
White Co., Inc., David

COMPASSES, Magnetic

Ainsworth & Sons
Airpath Instrument
Amer. Thermo Ware
Baker Compass Co.
Belock Instr.
Bendix, Eclipse-Pioneer
Berger & Sons
Brunson Instr. Co.
Central Scientific



BAILEY
MINI-LINE
SELECTOR STATION

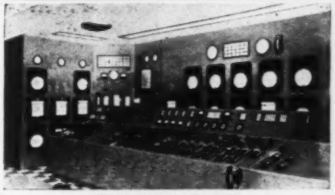
• Provides all necessary indications and controls for "bumpless" transfer and for complete automatic or hand operation of a pneumatic control system. Used as a combustion trend indicator, hand-auto selector, and set point or biasing adjuster.

May include as many as four indications of vital control system signals. Vibration and shock proof construction makes the Bailey MINI-LINE Selector Station suitable for marine, mobile, and other severe operating service.

Request Product Specification P99-1.

BAILEY METER COMPANY
1041 IVANHOE ROAD CLEVELAND, O
Bailey Meter Company Ltd. Montreal, Canada

For more information circle **81** on inquiry card.



BAILEY
Combustion
CONTROL

• Bailey Automatic Combustion Control results in substantial savings in fuel; increased boiler capacity; reduction of boiler and furnace maintenance; more time for operators to devote to general station maintenance; and improvement in the general character of service.

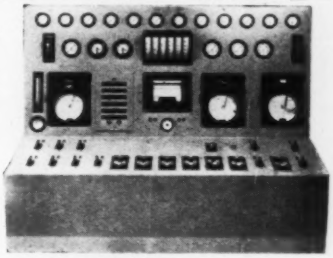
Bailey Automatic Combustion Control makes possible the every day operation of boilers at test efficiencies, because it is a COMPLETE combustion control system which: (1) automatically maintains steam pressure by supplying fuel and air simultaneously to boilers in accordance with changes in steam demand; (2) automatically maintains most economical fuel-air ratio by incorporating the **Bailey Boiler Meter** as an integral part of the system; (3) automatically maintains the desired furnace draft; and (4) automatically distributes load among boilers so that each unit carries its share.

This sturdy, inexpensive, air-operated control system has been applied to all sizes and types of boilers ranging from 200 hp upward. It is applicable to all fuels and all methods of firing.

Request Bulletin 1022 and Bulletin 1023.

BAILEY METER COMPANY
1041 IVANHOE ROAD · CLEVELAND, O.
Bailey Meter Company Ltd., Montreal, Canada

For more information circle **82** on inquiry card.



REPUBLIC
COMBUSTION CONTROL

Republic automatic pneumatic or electronic combustion control is available for all sizes of boilers, all types of fuel firing, all load conditions, and for any arrangement of draft equipment.

The Republic combustion control (1) automatically maintains constant steam pressure by controlling the heat input to the boilers; (2) automatically maintains highest combustion efficiency by controlling simultaneously the fuel and air input in measured proportions; (3) automatically maintains any desired load division between the boilers; (4) automatically maintains the correct constant draft in each furnace.

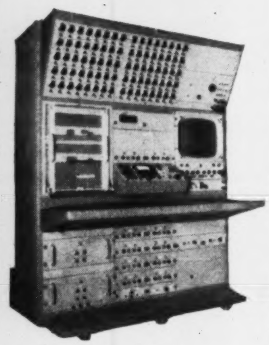
WRITE FOR DATA BOOK No. S-21

REPUBLIC FLOW METERS CO.
2240 Diversey Pkwy. Chicago 47, Ill.

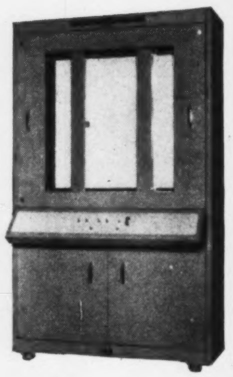
REPUBLIC
INSTRUMENTS • CONTROLS

For more information circle **83** on inquiry card.

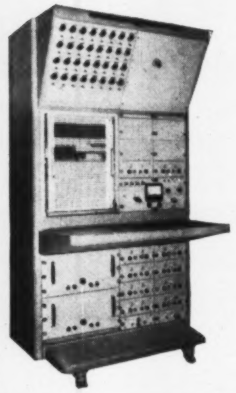
Developments from EAI



Computer Group 16-131R with AERO (Automatic Extended Readout), static, dynamic problem check, automatic hold. Info. on request.



Variplotter Model 205N, vertical plotting board for graphically presenting the progressing function of 2 variables. Spec. flyer available.



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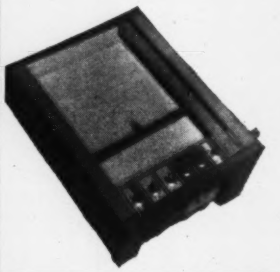

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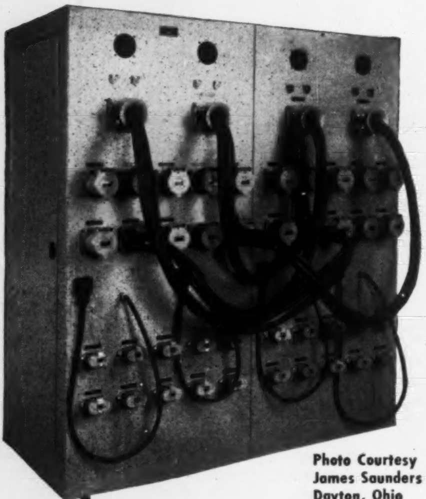

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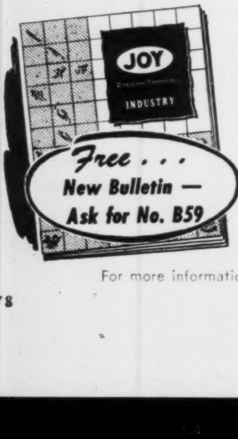

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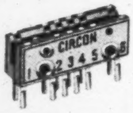

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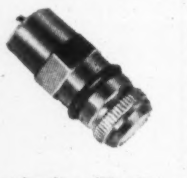

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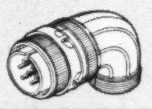

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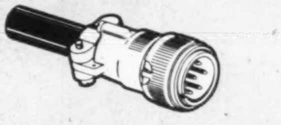

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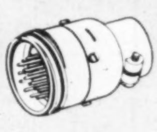

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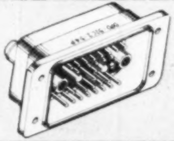

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SUB-MINIATURE
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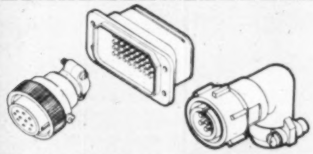

D, MC, DPA, DPX, AND K MINIATURES...miniatures and sub-miniatures designed for amplifiers, miniature indicators, computer circuits, telemetering equipment, small pre-amps, and general instrumentation where space is limited and current requirements are generally not over 5 amperes. Variety of shell styles, junction shell, and insert arrangements. 3 to 50 contacts, plus coaxials.

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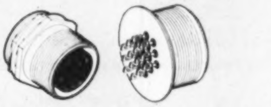

GS (AN TYPE), KH, RKH, DAH, BFH, TBFH, DBH, KH30...with steel shells and contacts to withstand high pressures from within or without. Insulation is a glass material, fused under high temperature to shell and contacts, thus forming a hermetic seal.

---

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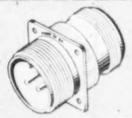
TEMPERATURE
and firewall
applications



AN-K, AN-"FW," AND CANNON K-"FW" STEEL SHELL CONNECTORS...Open flame protection offered in the greatest variety of this type of connector. Wall- or box-mounting receptacles. Straight or angle 90° plugs. Crimp-type contacts. Inserts of glass-filled materials.

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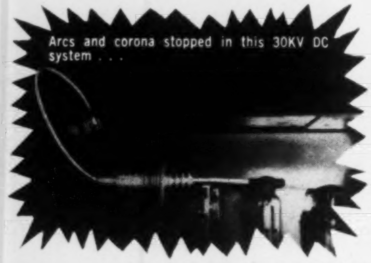

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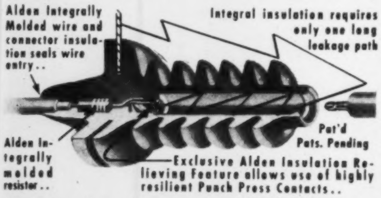
Alden Integrally Molded wire and connector insulation seals wire entry..
Integral insulation requires only one long leakage path
Pat'd Pats. Pending
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Exclusive Alden Insulation Relieving Feature allows use of highly resilient Punch Press Contacts..

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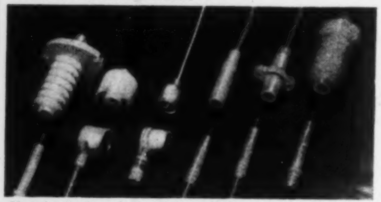

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Tube cap connectors for rectifying, transmitting and voltage regulating tubes can be integrally molded as part of a complete unit cable assembly.

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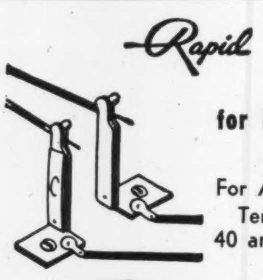

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CONTROL SYSTEMS, Machine Tool, see Machine Tool Controllers

CONTROL SYSTEMS Components, see circuits and Compound, Plug-in

CONTROL VALVES, see Valves

CONTROLS, see Controllers

CONTROLLERS, see Object of Measurement and Control. For example, for Flow Controller, see Flow.

CONTROLLERS, Air, see Pressure Regulators, Air

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4. STABLE: thermostatted types, such as shown, hold frequency ±1% between —55C and +85C.
5. PREDICTABLE: painstaking attention to core uniformity permits duplication of characteristics in a few or thousands.
6. AVAILABLE: most models stocked for same-day shipment.

Write today for details

Vari-L Company, Inc.
Established 1952
432 Fairfield Ave. • Stamford, Conn. • FI 8-0091

For more information circle **93** on inquiry card.

BRAININ ELECTRICAL CONTACTS

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from Order to Delivery!

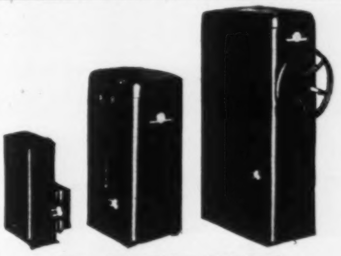
Your production problems may be simplified when you consult an organization with a long record of successfully serving electrical manufacturers in all types of precision work. Whether you are seeking advice on new applications, redesign, or wish your own designs executed, send us your requirements and they will receive our most careful attention.

Extra KNOW-HOW
for your specific design problems

PRECIOUS METAL PRODUCTS FOR ELECTRICAL MANUFACTURERS

C. S. BRAININ CO.
318 Washington St., Mount Vernon, N. Y.

For more information circle **92** on inqiury card.



BAILEY
CONTROL DRIVES

● These air-operated power units provide precise positioning of regulating devices such as dampers, butterfly valves, hydraulic couplings and feeders in accordance with a pneumatic control signal.

Improves flow characteristics through simple adjustment of positioning relay incorporated in the drives.

Easy installation and choice of location made possible by angular rotation of power take-off plus full assortment of standardized connecting linkage.

Type	Torque (ft-lb)	Max Angular Travel
AC44P	75	75°
AC68P	400	90°
AC816P	1500	90°
AC1016P	2350	90°

Type	Force (lb)	Linear Travel
AC1030P	1600	30 in.
AC1260P	2500	60 in.

Request Product Specification P81-1 for Control Drives and Product Specification P81-5 for control linkage.

BAILEY METER COMPANY
1041 IVANHOE ROAD CLEVELAND, O.
Bailey Meter Company Ltd. Montreal, Canada

For more information circle **94** on inquiry card.

BAILEY
MINI-LINE
MANUAL LOADER

- Provides an operator with manual control of remote pneumatic power units. Includes single or duplex indications on a single scale. Uses sensitive, high-capacity, hand-operated air relay.

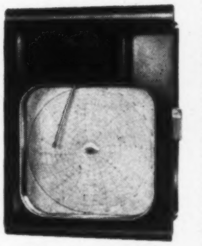
Standard loaders available for the following operations: Set Point (indicates loading and monitor); Bias (indicates loading and biased loading); and Basic (indicates loading only).

Vibration and shock proof construction makes the Bailey **MINI-LINE** Manual Loader suitable for marine, mobile, and other severe operating service.

Request Product Specification P99-2.

BAILEY METER COMPANY
1041 IVANHOE ROAD · CLEVELAND, O.
Bailey Meter Company Ltd., Montreal, Canada

For more information circle **95** on inquiry card.



Series
500 Controller

Automatic Controllers

Bristol Controllers are made in a wide variety of models including air-operated, electronic, and electric types.

Five kinds of control action: on-off, proportional, reset, derivative, and reset plus derivative, also autoset and cascade controllers, ratio controllers, pneumatic transmission, miniature instruments, program controllers, electronic potentiometers. For temperatures up to 4000F, pressure, absolute pressure, vacuum, draft, liquid level, flow, pH, humidity, time cycle and program, and control panels.

Write for Bulletins A130, DMC44, A115, B226, and C305.

BRISTOL COMPANY
112 Bristol Rd., Waterbury 20, Conn.
For more information circle **96** on inquiry card.

CONTROLLERS, Condenser Leakage, see Boiler Room Instruments

CONTROLLERS, Damper, see Boiler Room Instruments

CONTROLLERS, Desuperheat, see Boiler Room Instruments

CONTROLLERS, Draft, see Boiler Room Instruments

CONTROLLERS, Feed Water, see Boiler Room Instruments

CONTROLLERS, Filter Rate, see Water Works Instruments

CONTROLLERS, Furnace, see Combustion Control, also Furnace Control

CONTROLLERS, Gas Density, see Density

CONTROLLERS, Light, see Illumination

CONTROLLERS, Manual, Field

Allis-Chalmers
Automatic Electric
Betts & Betts
Black, Sivalls & Bryson
Bristol Co.
Clark Controller Co.
Climax Div.
Cutler-Hammer
Dahl & Co., G. W.
Dormitzer Electric
Fischer & Porter Co.
General Controls
G E. Apparatus Sales
Heller Co., Gerald
Kieley & Mueller
Magnetic Instr. Co.
Manning, Maxwell & Moore
National Elect. Controller
Ohmite Mfg. Co.
Square D Co.
Swartwout Co.
Superdraulic Corp.
Taylor Instr. Cos.
Ward Leonard
Westinghouse Electric

CONTROLLERS, Manual, Hydraulic Output

Askania Reg. Co.
Askania-Werke, A. G.
Autoclave Engrs.
B-I-F Industries
Barksdale Valves
Bell Aircraft Corp.
Blue M Electric
Bristol Co.
Brooks Rotameter
Cash Co., A. W.
Cook Electric
Cooper Co., Clark
Dahl & Co., G. W.
Defender Instr. & Reg.
Denison Engrg. Co.
General Controls
Genl. Regulator Corp.
Hagan Chem. & Controls
Hammel-Dahl
Hydraulic Controls
Infilco
Manning, Maxwell & Moore
Minneapolis-Honeywell
Phila. Gear Works
Republic Flow Meters
Ribble Engrg. Co.
Rivette Lathe & Grinder
Roy Co., Milton
Sanders Associates
Schade Valve Mfg.
Seely Instr. Co.
Shallcross Controls
Simplex Valve & Meter
Superdraulic Corp.
Trimount Instr. Co.
Vickers Inc.
Waterman Engrg. Co.
Westinghouse Electric

CONTROLLERS, Manual, Electric Motor Operated

Allen-Bradley
Allis-Chalmers
Amer. Kloeckner-Moeller
Automatic Elect. Mfg.
B-I-F Industries
B/W Controller
Betts & Betts
Bogue Electric Mfg.
Bristol Co.
Cardwell Mfg. Corp.
Clark Controller Co.
Cleveland Fuel Equip.
Cutler-Hammer
Cook Electric
Defender Instr. & Reg.
E-T-A-Products
Electric Switch Corp.
Electronic & Engrg. Serv.
Fasco Industries, Inc.
Fisher Governor
Furnas Electric
General Controls Co.
GE, Apparatus Sales
Genl. Regulator Corp.
Hays Corp.
Heller Co.
Johnson Service Co.
Keckley Co., O. C.
Lapp Insulator
Leeds & Northrup
Mag Elect. Prods.
Magnetic Amplifiers, Inc.
Magnetic Industries
Magnetic Instr. Co.
Maxson Instrument Div.
Minneapolis-Honeywell
National Controls
National Elect. Contr. Co.
Ohmite Mfg. Co.
Opad Electric
Paragon Electric
Phila. Gear Works
Raytheon Mfg.
Reliance Instr. Mfg.
Revco, Inc.
Scientific Instr. Co.
Servospeed Div.
Shallcross Controls
Simplex Valve & Meter
Square D Co.
Superior Electric
Teleflex, Inc.
Topp Industries
Trerice Co.
Trimount Instr. Co.
Ward Leonard
Westinghouse Electric
Wilson & Co.
Zenith Electric

CONTROLLERS, Manual, Pneumatic Output, including Manual/Auto Transfer Stations

AiResearch Mfg.
Amer. Meter Co.
Autom. Switch
B-I-F Industries
Bailey Meter Co.
Barksdale Valves
Barton Instr.
Black, Sivalls & Bryson
Bristol Co.
Brooks Rotameter
Climax Div.
Conoflow Corp.
Cutler-Hammer
Dahl Co., Inc., G. W.
Fischer & Porter Co.
Fisher Governor
Foxboro Co.
GE Apparatus Sales
General Controls Co.
Gen. Regulator Corp.
Hagan Chem. & Controls
Ideal-Aerosmith, Inc.
Infilco
Johnson Service Co.
Leeds & Northrup
Leslie Co.
Manning, Maxwell & Moore
Mason-Neilan Div.
Minneapolis-Honeywell
Moore Products
Natl. Pneumatic Co.
Panellit, Inc.
Penn Insts. Div.
Phila. Gear Works
Powers Reg. Co.
Republic Flow Meters
Research Control Instr.
Ross Operating Valve Co.
Scientific Instr. Co.
Shand & Jurs
Simplex Valve & Meter
Stratos Div.
Swartwout Co.
Taft-Peirce Mfg. Co.
Taylor Instr. Cos.
Westinghouse Air Brake
Westinghouse Electric
Zenith Elect. Co.

CONTROLLERS, Manual, Rheostatic

Accessory Prods.
AiResearch Mfg. Co.
Allen-Bradley
Beck Bros.
Bogue Electric Mfg.
Bristol Co.
Centralab Div.
Clark Controller Co.
Cutler-Hammer
Electric Switch Corp.
Electronic & Engrg. Serv.
General Controls Co.
GE, Apparatus Sales
General Radio
General Reg. Corp.
Heller Co.
Mallory & Co., P. R.
National Elect. Controller
Ohmite Mfg.
Phila. Gear Works
Rubicon Co.
United Optical
Ward Leonard
Westinghouse Electric

CONTROLLERS, Moisture, see Humidity

CONTROLLERS, Polymerization, see Control Systems, Process; also Flow; also Temperature; etc.

CONTROLLERS, Power Factor, see Power Factor, also Electric Power Instruments

CONTROLLERS, Pyrometric, see Temperature Controllers

CONTROLLERS, Radio Remote, see Telemetering, also Pressure Transmitter, etc.

CONTROLLERS, Rate-Volume, see Flow

CONTROLLERS, RKVA, see Electric Power Generation Instruments

CONTROLLERS, Stoker, see Boiler Room Instruments

CONTROLLERS, Temperature-Time, see Program Controllers

CONTROLLERS, Thermostatic, see Temperature

CONTROLLERS, Valve, see Valve-Operating Devices

CONTROLS, see Controllers

CONVERTERS, see Transducers, also Pickups

CONVERTERS, AC to DC, including Rotary

Adler Electronics
Airpax Prods. Co.
Amer. Electronics
Amer. Mach. & Foundry
Amer. Telev. & Radio
Arnoux Corp.
Automatic Electric
Autom. Timing & Controls
Bendix, Red Bank Div.
Bogue Electric Mfg.
Bristol Co.
Carter Motor Co.
Clark Controller
Consolidated Avionics
Cornell-Dubilier
Dalmotor Co.
Davenport Mfg.
Dynamics Res. Assoc.
Eicor, Inc.
Electro Engrg. Prod.
Electronic Spec. Co.
Electro Insts., Inc.
Electro Prods. Labs.
Electronic Measurements Co.
Electronics Res. Assoc.
Federal Telephone & Radio
Furnas Electric
Gates Electronic Co.
GE, Apparatus Sales
General Photo Prods.
Gothard Mfg. Co.
Green Rectifier
Heller Co.,
Indust. Test Equipt. Co.
Instrument Corp.
Instrument Devel. Labs
Interelectronics Corp.
International Rectifier
Janette Mfg. Co.
Kato Engrg.
Kellogg Switchboard
Kepco Labs.
LaMarch Mfg. Co.
Lear, Inc.
Magnetic Amplifiers
Magnetic Instr. Co.
Mallory & Co., P. R.
Maxson Instr. Div.
McColpin Christie Corp.
Model Rectifier
Motordyne, Inc.
Nader Mfg. Co.
Natl. Aircraft Corp.
Newark Electric Co.
Non-Linear Systems
Opad Electric
Perkin Engrg. Co.
Potter Aeronaut. Corp.
Raytheon Mfg. Co.
Rheem Mfg. Co.
Sangamo Electric
Servo-Tek Prods.
Small Motors, Inc.
Sorensen & Co.
Syntron Co.
Technical App. Builders
Transmag Div.
Universal Transistor
Varo Mfg. Co.
Walker Div.
Wallson Associates
Ward Leonard Elect. Co.
Western Gear Corp.
Westinghouse Electric
Weston Electcl. Instr.

CONVERTERS, Analog-to-Digital

Aero Electronics
Airflyte Elec. Co.
Amer. Mach. & Foundry
Assembly Products
Autonetic Div.
BJ Electronics
Baird-Atomic
Barnes Engrg. Co.
Bendix, Computer Div.
Bendix-Pacific
Benson-Lehner Corp.
Berkeley Div.
Bristol Co.
Coleman Engrg. Co.
Commercial Res. Div.
Computer Insts. Corp.
Consolidated Avionics
Consol. Electrodynamics
Cubic Corp.
Datran Electronics
Davies Labs. Div.
Daystrom Systems
Dayton Instr., Inc.
Dynapar Corp.
Electro Insts., Inc.
Electro-Mec Laboratory
Electronic Assocs., Inc.
Electronics Corp. of Amer.
Endevco Corp.
Engrg. & Res. Corp.
Epsco, Inc.
Fed. Telephone & Radio
Ferranti Electric
Fischer & Porter
Ford Instr. Co.
Franklin Electronics
Genisco, Inc.
Giannini & Co.
Giannini, Datex Div.
Gilmore Industries
Gurley, W. & L. E.
Hanson-Gorrill-Brain
Hoover Electronics Co.
Hycon Electronics
Indust. Electronic Engrs.
Industrial Control Co.
Instrument Devel. Labs.
Jackson Co., Byron
Jacobs Instr. Co.
Julie Res. Labs.
Kearfott Co.
Librascope, Inc.
MacLeod & Hanopol
Magnavox Co.
Mid-Century Instrumatic
Natl. Aircraft Corp.
National Co.
Non-Linear Systems
Norden-Ketay
Northam Electronics
Potter Instr. Co.
Radiation Inc.
Reeves Instr. Corp.
Remington Rand Univac
Streeter-Amet
Systems Div. Beckman
Systron Corp.
Tally Register
Telecomputing Corp.
Wang Labs., Inc.
Wiancko Engrg. Co.

CONVERTERS, Binary-to-Decimal

Airflyte Electronics
Beattie-Coleman
Bendix Aviation Corp.
Berkeley Div.
Clary Corp.
Computer Control Co.
Consolidated Avionics
Consol. Electrodynamics
Datran Electronics
Daystrom Systems
Electro Insts., Inc.
Fischer & Porter Co.
Franklin Electronics
Giannini & Co.
Giannini, Datex Div.
Indust. Electronic Engrs.
Jacobs Instr. Co.
Julie Res. Labs.
Kearfott Co.
Librascope, Inc.
Monroe Calc. Mach. Co.
Natl. Aircraft Corp.
National Co.
Neutronics Research
Non-Linear Systems
Norden-Ketay Corp.
Potter Instr. Co.
Radiation Inc.
Systems Div., Beckman
Systron Corp.
Taller & Cooper
Telemeter Magnetics, Inc.
Wang Labs.

CONVERTERS, Digital-to-Analog

Airflyte Electronics
Amer. Mach. & Foundry
Barnes Engrg. Co.
Baird-Atomic
Beattie-Coleman
Bendix-Pacific
Benson-Lehner Corp.
Berkeley Div.
Bristol Co.
Coleman Engrg. Co.
Consolidated Avionics
Datran Electronics
Daystrom Systems
Electronic Assocs., Inc.
Engrg. & Res. Corp.
Epsco, Inc.
Ferranti Electric
Ford Instr. Co.
General Prec. Lab.
Genisco Inc.
Giannini & Co.
Giannini, Datex Div.
Gilmore Industries
Hoover Electronics
Indust. Electronic Engrs.
Jacobs Instr. Co.
Julie Res. Labs.
Kearfott Co.
Librascope, Burbank Div.
Mid-Century Instrumatic
Monroe Calc. Mach. Co.
Natl. Aircraft Corp.
National Co.
Neutronics Research
Non-Linear Systems
Norden-Ketay
Potter Instr. Co.
Radiation Inc.
Systems Div., Beckman
Systron Corp.
Taller & Cooper
United Electrodynamics
Wang Labs.
Waugh Engrg. Co.
Wiancko Engrg. Co.

CONVERTERS, Electric-to-Hydraulic

Bell Aircraft Corp.
Bendix Aviation Corp.
Bristol Co.
Engrg. & Res. Corp.
Hagan Chem. & Controls
Kearfott Co., Inc.
Manning, Maxwell & Moore
Muirhead Instrument
Natl. Aircraft Corp.
Sanders Associates
Vickers, Inc.

CONVERTERS, Electric-to-Pneumatic

Bristol Co.
Fischer & Porter Co.
Foxboro Corp.

Hagan Chem. & Controls
Johnson Service Co.
Manning, Maxwell & Moore
Potter Instr. Co.
Taylor Instr. Cos.

CONVERTERS, Frequency

Airpax Products
Amerac, Inc.
Amer. Electronics
Amer. Elect. Motors
Amer. Mach. & Foundry
Automatic Electric
Bendix, Red Bank Div.
Berkeley Div.
Bogue Electric Mfg.
Boonton Radio
Bristol Co.
Burke Electric
Carter Motor Co.
Consolidated Avionics
Dynamics Res. Assoc.
Eicor, Inc.
Elec. Motors & Specialties
Electric Spec. Co.
Electro-Voice, Inc.
Fischer & Porter
GE, Apparatus Sales
I-L-S Instr. Corp.
Inet-Palmer Div.
Instr. Devel. & Mfg.
Jack Scient. Instr. Co., Bill
Kato Engrg.
Magnetic Instr. Co.
Measurements Corp.
Natl. Aircraft Corp.
National Co.
Perkin Engrg. Co.
Philamon Labs.
Potter Aeronaut. Co.
Potter Instr. Co.
Riverbank Labs.
Robbins & Myers
Servo Corp. of Amer.
Sorensen & Co.
Stelma, Inc.
Systems Div., Beckman
Systron Corp.
Technical App. Builders
Tech. Material Corp.
Tel-Instr. Electronics
Thordarson-Meissner
Trio-Labs., Inc.
Universal Transistor
Varo Mfg. Co.
Vibration Res. Labs.
Walkirt Co.
Walker Div.
Western Gear Corp.
Westinghouse Electric

CONVERTERS, Magnetic, DC to AC

Adler Electronics
Aerovox Corp.
Airpax Products
Amer. Electronics
Arnoux Corp.
Avion Div.
Bogue Elect. Mfg. Co.
Bristol Co.
Brit. Electronic Sales Co.
Calif. Magnetic Cont. Corp.
Carter Motor Co.
Communication Access.
Davenport Mfg.
Dynamics Res. Assoc.
Electro Engrg. Prod. Co.
Electronic Measurements
GE, Apparatus Sales
General Magnetics
Inet-Palmer Div.
Interelectronics Corp.
Kato Engrg.
Leland Electric
Magnetic Amplifiers
Magnetic Instr. Co.
Magnetic Research Corp.
Minn.-Honeywell, Boston
Motordyne, Inc.
Natl. Aircraft Corp.
Perkin Engrg. Co.
Rheem Mfg. Co.
Stator Electric
Timely Insts. & Conts.
Transmag Div.
Transval Engrg. Corp.
Varo Mfg.
Wang Labs.
Western Gear Corp.

CONVERTERS, Punched Card

Austin Co.
Bendix, Computer Div.
Berkeley Div.
Computer Control Co.
Consolidated Avionics
Electro Insts., Inc.
Epsco, Inc.
Giannini, Datex Div.
Kleinschmidt, Inc.
Librascope, Inc.
Librascope, Burbank Div.
Mid-Century Instrumatic
Moseley Co.
Natl. Aircraft Corp.
Non-Linear Systems
North Amer. Instr.
Potter Instr. Co.
Remington-Rand Univac.
Systematics, Inc.
Systron Corp.
Taller & Cooper
Telecomputing Corp.
Tri-Tronics Co.
Ultrasonic Corp.

CONVERTERS, Punched Tape

Austin Co.
Bendix, Computer Div.
Berkeley Div.
Commercial Controls Corp.
Computer Control Co.
Consolidated Avionics
Corbett Science Labs.
Daystrom Systems
Electro Insts., Inc.
Epsco, Inc.
Ferranti Electric
Fish-Schurman
Giannini Datex Div.
Librascope, Burbank Div.
Librascope, Inc.
Mid-Century Instrumatic
Moseley Co.
Non-Linear Systems
Nuclear Devel. Corp. of Amer.
Potter Instr. Co.
Remington Rand
Systematics Inc.
Systron Corp.
Taller & Cooper
Telecomputing Corp.
Telemeter Magnetics, Inc.
Tri-Tronics Co.
Ultrasonic Corp.

CONVERTERS, Rotary, DC to AC

Barnes Devel. Co.
Bendix, Red Bank Div.
Bogue Electric Mfg.
Carter Motor Co.
Dalmotor Co.
Eicor, Inc.
GE, Apparatus Sales
Gothard Mfg.
Inet-Palmer Div.
Interelectronics Corp.
Jack Scient. Instr. Co., Bill
Kato Engrg.
Leland Electric
Magnetic Instr. Co.
Maxson Instruments
Motordyne, Inc.
Sangamo Electric
Siemon Engrg. Co.
Small Motors, Inc.
Summers Gyroscope
Varo Mfg. Co
Western Gear Corp.
Westinghouse Electric

CONVERTERS, Vibrator, DC to AC

Airpax Prods. Co.
Amer. Television & Radio
Applied Science Corp.
Automatic Electric
Avion Div.
Barber-Colman
Barnes Devel. Co.
Bendix, Eclipse-Pioneer
Bristol Co.
Brunswick Instruments
Calif. Magnetic Cont. Corp.
Carter Motor Co.
Cornell-Dubilier
Davenport Mfg.
DuMont Labs., Allen B.
Eicor, Inc.
Electronic Instr. Co.
Electronic Spec. Co.
GE
Giannini & Co.
Industrial Control Co.
Industrial Test Equipt.
Instr. Devel. & Mfg.
James Vibrapowr Co.
Kurman Electronics
Lafayette Instr. Co.
Magnetic Instr. Co.
Magnetic Res. Co.
Mallory & Co., P. R.
Menlo Research Lab.
Millivac Instr. Co.
Minneapolis-Honeywell
Modern Tech. Supply
Nader Mfg. Co.
Precise Measmts. Co.
Rheem Mfg. Co.
Stevens-Arnold
Transval Engrg. Corp.
Vibration Research Labs.
Western Gear Corp.

CORDS, see Cable

CORDS, Patch

Aerolite Electronics
Alden Products
AMP, Inc.
Ampco Mfg. Co.
Audio Devel. Co.
Automatic Electric
Berkeley Div.
Coaxial Connector Co.
Donner Scientific
General Radio
Instr. Devel. & Mfg.
Lab-Tronics
Phalo Plastics
Precision Mfg. Co.
Reeves Instr. Corp.
Standard Electric
Std. Elect. Time Co.
Stromberg-Carlson
Virginia Electronics
Waldon Electronics

CORES, Magnetic, see Magnetic Cores

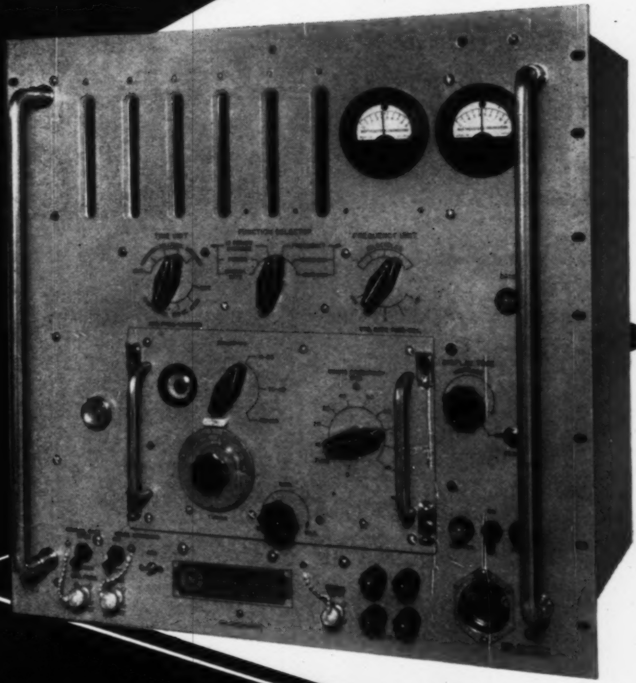
COTTERS, External

Albany Prods. Co.
Amer. Chain Div.
Hunter Spring
Std. Horse Nail

COUNTERS, Alarm

Adde & Co.
Anatran. Engrg. Corp.
Autom. Temp. Contr. Co.
Cal-Tronics Corp.
Clevite Res. Center
Counter & Control Corp.
Cook Electric
Daystrom Systems
De-Tec-Tronic Corp.
Durant Mfg.
Electrical & Phys. Instr.
El-Tronics, Inc.
Fischer & Porter
Gaydon Co.
GE

electronic counter



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ACCURATE • SIMPLE
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RELIABLE

FREQUENCY MEASUREMENTS
10 CPS to 220 MC; TIME
INTERVAL 1 MS to 100 DAYS;
PULSE LENGTH, REP, RATES,
FREQUENCY DRIFT

northeastern engineering
Manchester New Hampshire

For more information circle **97** on inquiry card.

NMC
INDIANAPOLIS

Nuclear Instruments

AIR MONITORS

Automatically record and warn of α, β and γ radiation in airborne particles for periods up to one week, unattended. Fixed or moving filters. Standard and custom units or complete systems.

PROPORTIONAL COUNTING SYSTEMS

For precision counting of α, β and γ radiation from prepared samples. Ideal for C^{14}, Ca^{45}, P^{32} and H^3. New low power design reduces heat, assures longer life.

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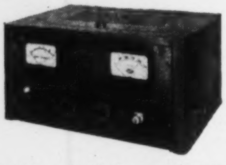

Operate GM, scintillation and proportional counting detectors. Equipped to drive recorders and alarms. Logarithmic or linear models for monitoring or laboratory use.

PORTABLE SURVEY METERS

High precision, compact, portable Geiger and scintillation counters. Critical components shock mounted and watertight. For precise laboratory measurement or rugged field use.

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NMC Nuclear Measurements Corp.
2460 N. Arlington Ave.
Phone: Liberty 6-2415
INDIANAPOLIS 18, INDIANA

International Office: 13 E. 40th St., New York 16, N.Y.

For more information circle **98** on inquiry card.

Lumenite Electronic
Martin-Hubbard
Mercoid Corp.
Metrotype Corp.
Nuclear Research
Peschel Electronics, Inc.
Photobell Co.
Potter Instr. Co.
Production Instr. Co.
Radiation Instr. Devel. Lab.
Ram Meter, Inc.
Rowe Engrg. Co.
Streeter-Amet
Systrom Corp.
Victoreen Instr.
Veeder-Root
Western Radiation Lab.

COUNTERS, Batch, see Counters, Predetermined

COUNTERS, Binary

Baird-Atomic
Burroughs Electronics
Computer Counter Co.
Computer-Measmnts. Corp.
Consolidated Avionic
Daystrom Instrument
Daystrom Systems
Detectolab, Inc.
Engineered Electronics
Hamner Electronics
Hycon Electronics
I-L-S Instr. Corp.
Jacobs Instr. Co.
Kaiser Aircraft & Elect.
Kearfott Co., Inc.
Magnetics Res. Co.
NRD Instr. Co.
Nuclear-Chicago
Nuclear Corp. of Amer.
Potter Instr. Co.
Radiation Instr. Devel. Lab.
Ransom Research
Taller & Cooper, Inc.
Telemeter Magnetics, Inc.
Texas Instrs., Inc.
Victoreen Instr. Co.
Walkirt Co.
Wang Labs.

COUNTERS, Chart-recording

Alden Electron & Impulse
B-I-F Industries
Bristol Co.
Consolidated Avionics
Elect. Tachom. Corp.
Engler Instr. Co.
Gorrell & Gorrell
Heat-Timer Corp.
Larson Instrument
Orban Co., Kurt
Potter Instr. Co.
Radiation Instr. Devel. Lab.
Royson Engrg. Co.
Taller & Cooper, Inc.

COUNTERS, Colony, see Counters, Micro particle

COUNTERS, Decade

Alcor Electronics
Amer. Tradair Corp.
Anatran Engrg. Corp.
Auto. Electric Sales
Baird-Atomic
Bendix, Cincinnati Div.
Berkeley Div.
Boulin Instr.
Bowmar Instr. Corp.
Brush Electronics
Burroughs Electronics
Computer-Measmts. Corp.
Consolidated Avionics
Dayton Instruments
Dectolab, Inc.
Dynapar Corp.
Engineered Electronics
Ferrara, Inc.
Freed Transf. Co.
Hamner Electronics
Haydu Brothers
Hewlett-Packard
Hunter Mfg. Co.
I-L-S Instr. Corp.
Indust. Electronic Conts.
Intelex Systems
Hupp Instrumentation
Jessup Engrg. & Dev.
Kaiser Aircraft & Elect.
Kellogg Switchboard
Magnetics Res. Co.
Maxson Instruments
Nader Mfg.
NRD Instr. Co.
Natl. Aircraft Corp.
North Amer. Philips
Northeastern Engrg., Inc.
Nuclear Corp. of Amer.
Nuclear Measmts. Corp.
Nuclear-Chicago
Post Machy. Co.
Potter Aeronaut. Co.
Potter Instr. Co.
Radiation Instr. Devel. Lab.
Ram Meter, Inc.
Ransom Research
Sciaky Bros., Inc.
Spellman Television
Systron Corp.
Telecomputing Corp.
Telemeter Magnetics, Inc
Tracerlab, Inc.
Victoreen Instr. Co.
Walkirt Co.

COUNTERS, Electrical Impulse

Abrams Instr. Corp.
Aero Instr. Co.
Alcor Electronics
Amer. Electroneering
Amer. Electronic Labs.
Amer. Tradair Corp.
Anatran Engrg. Corp.
Auto. Electric Sales
Automatic Electric
Autom. Timing & Controls
Autron Engrg., Inc.
Baird-Atomic
Bendix Aviation Corp.
Boulin Instr.
Bristol Co.
Butler Mfg.
Cal-Tronics
Cambridge Thermionic
Central Scientific
Cincinnati Time Rec. Co.
Coleman Engrg. Co.
Computer Control Co.
Computer-Measmts. Corp.
Consolidated Avionics
Control Corp.
Control Engrg. Co.
Corbett Science Labs.
Counter & Control Corp.
Cyclotron Specialties
Davenport Mfg.
Digitac, Inc.
Dittmore & Freimuth
Durant Mfg. Co.
Eagle Signal Corp.
Elect. Tachom. Corp.
Electronic Control Systems
El-Tronics, Inc.
Electro-Tech Equip.
Endevco Corp.
Engineering Res. Assocs.
Engr. Research & Devel.
Fischer & Porter Co.
Freed Transf. Co.
GE
General Controls
Genisco, Inc.
Guardian Electric
Hagen Mfg.
Haledy Electronic
Hamner Electronics
Haydon Co., H. W.
Haydu Brothers
Heat Timer Corp.
Hewlett-Packard
Hunter Mfg.
Hupp Instrumentation
Hycon Electronics
Indust. Electronic Conts.
Industrial Electronics
Jack Scient. Instr. Co., Bill
Jessup Engrg. & Devel.
Kearfott Co.
Landis & Gyr
Lumenite Electronic
Magnetics Res. Co.
Maxson Instruments
Mueller Lab.
Nader Mfg.
Nemeth Labs.
Newton Co.
North Electric
Orban Co., Kurt
Peschel Electronics
Photobell Co.
Photocon Research
Potter Aeronaut. Co.
Potter Instr. Co.
Production Instr. Co.
Radiation Instr. Devel. Lab.
Ram Meter, Inc.
Ransom Research
Raycon Corp.
Remington Rand Univac
Richardson Scale
Royson Engrg. Co.
Sangamo Electric
Std. Elect. Time Co.
Stepper Motors Corp.
Stewart Instr. Co.
Stoelting Co.
Streeter-Amet
Sunshine Scientific
Systron Corp.
Taller & Cooper, Inc.
Taylor-Emmett Controls
Telecomputing Corp.
Thordarson-Meissner
Unimax Switch Div.
Univ. Atomics Corp.
U. S. Instr. Corp.
Veeder-Root
Victoreen Instr. Co.
Walkirt Co.
Wang Labs.
Wiancko Engrg. Co.

COUNTERS, Electronic, including Events-per-unit-time (EPUT)

ACF Electronics
Abrams Instr. Co.
Acromark
Adde & Co.
Aero Instr. Co.
Alcor Electronics
Alina Corp.
Allegany Instr. Co.
Amer. Electroneering
Amer. Electronics Labs.
Amer. Time Prods.
Amer. Tradair Corp.
Anatran Engrg. Corp.
Austin Co.
Automation Management
Automatic Electric
Autom. Timing & Controls
Autotron Co.
Avion Div.
BJ Electronics
Barbour-Stockwell
Baird-Atomic
Bendix, Cincinnati Div.
Berkeley Div.
Bowmar Instr. Corp.
Bristol Co.
Brush Electronics
Burroughs Electronics
Butler Mfg.
Cal-Tronics
Cincinnati Time Recorder
Clary Multiplier
Clevite Res. Center
Computer Control Co.
Computer-Measmts. Corp
Consolidated Avionics
Control Devices, Inc.
Control Engrg. Co.
Cook Electric
Corbett Science Labs.
Counter & Control Corp.
Cramer & Co. Controls Corp.
Cyclotron Specialties
Daytronic Corp.
Daystrom Systems
Detect-O-Ray
Detectron Co.
Devtronics, Inc.
Dittmore & Freimuth
Durant Mfg.
Dynapar Corp.
Eagle Signal Corp.
Eastern Prec. Resistor
Engineered Electronics
Electric Speed Indic. Co.
Electrical Devel.
Elect. Tachom. Corp.
Electro Insts., Inc.
Electro-Pulse Inc.
Electronic Controls
Electronic Control Systems
Electronics Corp. of Amer.
Electronic & Engrg. Serv.
El Mec Labs.
El-Tronics, Inc.
Engineering Res. Assoc.
Federal Telephone & Radio
Fischer & Porter
Ford Instr. Co.
Foxboro Co.
Freed Transf. Co.
GE, Electronics Div.
GE, Telechron Dept.
Gordon Enterprises
Gorrell & Gorrell
Guardian Electric
Haledy Electronic
Hart Mfg. Co.
Haydon Co., A. W.
Haydu Brothers
Hetherington, Inc.
Hewlett-Packard
Hunter Mfg. Co.
Hupp Instrumentation
I-L-S Instr. Corp.
Industrial Elect. Controls
Instrument Lab., Inc.
Jacobs Instr. Co.
Jessup Engrg. & Devel.
Kay Electric
Kearfott Co.
Krohn-Hite
Landis & Gyr
Larson Instrument
Librascope, Inc.
Little, Inc., Arthur D.
Lumenite Electronic
Magnetics Res. Co.
McDonnell Odometer Co.
Menlo Research Lab.
Minnesota Electronics
Moisture Register Co.
Natl. Aircraft Corp.
Nelson Instr. Co.
Norden-Ketay
Northeastern Engrg.
Nuclear-Chicago
Nuclear Corp. of Amer.
Nuclear Measmts. Corp.
Nuclear Research
Pacific Transducer
Paragon Electric
Penn Insts. Div.
Performance Measmts.
Peschel Electronics
Photobell Co.
Post Machinery Co.
Potter Aeronaut. Co.
Potter Instr. Co.
Probescope Co.
Production Instr. Co.
Radiation Insts. Devel. Lab.
Radioactive Prods., Inc.
Ransom Research
Raycon Corp.
Raytheon Mfg.
Redington Co.
Richardson Scale
Rowe Radio Research
Scientific Specialties
Shallcross Mfg.
Special Insts. Lab.
Spivey, Inc., James S.
Std. Elect. Time Co.
States Co.
Stewart Instr. Co.
Stoelting Co.
Stratex Instr. Co.
Streeter-Amet
Struthers Dunn
Sunshine Scientific
Systron Corp.
Taller & Cooper
Technical Associates
Telecomputing Corp.
Thordarson-Meissner
Veeder-Root
Victoreen Instr. Co.
Virginia Electronics
Walkirt Co.
Wang Labs.
Westinghouse Electric
Westport Electric
Wilson & Co.
Worner Electronic Devices

COUNTERS, Footage

Adde & Co.
Anatran Engrg.
Barbour Stockwell
Bogue Electric Mfg.
Bristol Co.
Computer-Measmts. Corp.
Cook Electric
Counter & Control Corp.
Dittmore & Freimuth
Durant Mfg.
Electro-Tech Equip.
Elect. Tachom. Corp.
Engler Instr. Co.
Freed Transf. Co.
General Controls
G. M. Mfg. Co.
Gordon Enterprises
Haledy Electronic
Hasler-Tel Co.
Hetherington, Inc.
Indust. Nucleonics
Librascope, Burbank Div.
Maxson Instruments
McDonnell Odometer Corp.
Minneapolis Electric
Newton Co.
Nuclear Devel. Lab.
Nucleonic Corp.
Olympic Instr. Labs.
Perkins & Son, Inc.
Post Machy. Co.
Potter Instr. Co.
Production Instr. Co.
Richardson Scale
Royson Engrg. Co.
Streeter-Amet
Systron Corp.
Veeder-Root
Zernikow Co.

COUNTERS, Geiger-Mueller (see also Radioactivity)

Abrams Instr. Co.
Air-O-Tronics
Alpine Labs. Ltd.
Amer. Instr. Co.
Amer. Tradair Corp.
Amperex Electronic
Anton Electronic Labs.
Atomic Instr. Co.
Atomlab, Inc.
Baird-Atomic
BJ Electronics
Bendix, Eclipse-Pioneer
Bendix, Red Bank Div.
Berkeley Div.
Cambridge Instr. Co.
Can. Rad. & Uran.
Corbett Science Labs.
Cornell-Dubilier
Coulter Electronics
Cyclotron Specialties
Daystrom Instr.
Detectolab, Inc.
Detectron Co.
Distillation Products
Douglas Instr. Labs.
Douglas Radio Labs.
Electronic & Engrg. Serv.
Electronic Instr. Co.
El-Tronics, Inc.
Fisher Res. Lab.
Forro Scientific Co.
GE, Apparatus Sales
General Radio Co.
Geophysical Instrument
Georator Corp.
Giannini & Co.
Hansen Co., Wm.
Herback & Rademan
Hewlett-Packard
I-L-S Instrument
Instr. Devel. Labs.
Instruments Inc.
Jordan Electronic Mfg. Co.
Jordan Electronics
Landsverk Electrometer
Leighton Labs., H. W.
Leland Labs., H. W.
Librascope, Inc.
MacDonald Co., W. S.
Menlo Research Lab.
Mt. Sopris Instr. Co.
NRD Instr. Co.
North Amer. Philips Co.
Nuclear-Chicago
Nuclear Corp. of Amer.
Nuclear Devel. Lab.
Nuclear Measurements Corp.
Nuclear Research
Nuclear Science & Engrg.
Nucleonic Corp.
Ohmart Corp.
Pacific Transducer
Potter Instr. Co.
Prec. Radiation Insts.
Radiation Counter Labs.
Radiation Instr. Dev. Labs.
Radiation Res. Corp.
Radioactive Prods., Inc.
Radio City Products
Raytheon Mfg.
Raytheon Tube Div.
Servo Corp. of Amer.
Southw. Indust. Electronics
Special Insts. Lab.
Stoelting Co.
Stratex Instr. Co.
Streeter-Amet
Sylvania Elect. Prods.
Technical Associates
Technical Measmt. Corp.
Thordarson-Meissner
Tracerlab Inc.
Ultra-Violet Prods.
United Engineers
Universal Transistor
Universal X-Ray Prods.
Vacutron, Inc.
Victoreen Instr. Co.
Walkirt Co.
Welch-Allyn Inc.
Western Radiation Lab.
Wilmar Mfg.
Wood Counter Lab.

COUNTERS, Hour, see Timers

COUNTERS, Mechanical, including Stroke

Acromark Co.
Adde & Co.
Advanced Electronics
Alpine Labs. Ltd.
Amer. Time Prods.
Anatran Engrg. Corp.
Atomic Instruments
Autom. Timing & Controls
Autron Engrg., Inc.
Automation Management
Barbour-Stockwell
Berkeley Div.
Borg Equipt. Div.
Bowmar Instr. Corp.
Bristol Co.
Clary Multiplier
Clevite Res. Center
Coleman Engrg. Co.
Cook Electric
Counter & Control Corp.
Cyclotron Specialties

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Exhibit space at the 4th INTERNATIONAL AUTOMATION EXPOSITION should sell-out in a hurry.

Plan now to budget time and money for 1958's biggest automation event.

Automation Congress, Conferences, and Clinics, associated with the Show, guarantee intensified local and overseas interest in this event.

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WHERE—New York Coliseum

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PRESET COUNTER

By **FREED**

The Freed Model 2020 Preset Counter is designed for low cost reliable counting applications, where accuracy and maintenance-free operation is required.

Cold cathode counting and trigger tubes, with simplified circuits, are used throughout which assure years of trouble-free counting service and low-power consumption.

Model 2020 is a 4-digit single preset counter capable of controlling any operation that is repeated up to 9,999 times. Any number from 1 to 9,999 may be preset on the 4-digit selector switches. When the preset total has been reached, the counter will provide an output pulse and close contacts on a relay. These outputs may be used simultaneously or separately to stop machines, actuate control signals, or trigger additional equipment.

SPECIFICATIONS

Maximum Count: Four digits — 9,999

Size: 8 x 6 x 12 inches

Maximum Counting Rate: 300,000 counts per minute

Weight: 11 pounds

Input Sensitivity and Waveform: Not critical

Power: 25 watts 105-125 volts, 50-60 cycles

Outputs: Relay contact 10 Amperes Pulse output 50 volts

Price: $425.00

FREED ALSO MANUFACTURES TOTALIZING, PRESET, AND BATCHING COUNTERS

SEND FOR COMPLETE INFORMATION

FREED TRANSFORMER CO., INC.
1714 Weirfield Street
Brooklyn (Ridgewood) 27, N.Y.

For more information circle **100** on inquiry card.

Dittmore & Freimuth
Durant Mfg.
Eagle Signal Corp.
Electro-Tech Equip.
Elect. Tachom. Corp.
Endevco. Corp.
Engler Instr.
Engr. Res. & Devel.
Fischer & Porter
Ford Instr. Co.
Gap Instr. Co.
General Controls
Genisco, Inc.
Gordon Enterprises
Gorrell & Gorrell
Guardian Electric
Hagen Mfg.
Haledy Electronic
Hart Mfg. Co.
Hunter Mfg. Co.
Hycon Electronics
Impact Register
Internat. Register Co.
Kearfott Co.
Landis & Gyr
Lumenite Electronic
McDonnell Odometer Co.
Moisture Register Co.
Opplem Co.
Orban Co., Kurt
Photocon Research
Potter Instr. Co.
Production Instr. Co.
Ram Meter, Inc.
Raycon Corp.
Remington-Rand Univac
Redington Co.
Richardson Scale
Royson Engrg. Co.
Streeter-Amet
Taller & Cooper
Veeder-Root
Walkirt Co.

COUNTERS, Microparticle

Amer. Optical
Bush Assoc., G. F.
Central Scientific
Fisher Scientific
Fish-Schurman
Nikon, Inc.
Optionic Research, Inc.
Sargent & Co.

COUNTERS, Photoelectric

ACF Electronics
Alcor Electronics
Alpine Labs. Ltd.
Amer. Electronic Labs.
Automation Management
Autotron Co.
Autron Engrg., Inc.
Avion Div.
Baird-Atomic
Basic Controls, Inc.
Berkeley Div.
Cal-Tronics Corp.
Computer-Measmts. Corp.
Corbett Science Labs.
Datascan Corp.
Davenport Mfg. Co.
Daytronic Corp.
Detect-O-Ray
De-Tec-Tronic Labs.
Dittmore & Freimuth
Durant Mfg. Co.
Dynapar Corp.
Electronic Controls Corp.
Electronic Prods. Co.
Electronics Corp. of Amer.
Electro-Physics Co.
Electro-Tech Equip.
El-Tronics, Inc.
Engrg. Res. & Devel.
Ess Instr. Co.
Fisher-Pierce
Freed Transf. Co.
GE
Haledy Electronic
Heat-Timer Corp.
Hewlett-Packard
Hupp Electronics
Hunter Mfg.
Indust. Electronic Conts.
Industrial Electronics
Kaye Devel. Co.
Lumenite Electronic
Machinery Electrification
Magnetic Amplifiers Inc.
Nader Mfg.
NRD Instr. Co.
Optionic Research, Inc.
Photobell Co.
Post Machinery
Potter Instr. Co.
Production Instr. Co.
Ram Meter, Inc.
Rockwell Engrg. Co.
Scientific Specialties
Sherron Metallic Corp.
Spellman Television
Standard Elect. Time
Standard Piezo
Sticht Co., Herman H.
Streeter-Amet
Sunshine Scientific
Systron Corp.
Telecomputing Corp.
Thordarson-Meissner
Tri-Tronics Co.
Vacutron, Inc.
Veeder-Root
Walkirt Co.
Weston Electcl. Instr.
Worner Electronic Devices

COUNTERS, Predetermined, including Batch

Adde & Co.
Alcor Electronics
Anatran Engrg. Co.
Automation Management
Autom. Timing & Controls
Autron Engrg., Inc
Baird-Atomic
Basic Controls, Inc.
Bendix, Cincinnati
Berkeley Div.
Boulin Instr.
Burroughs Corp.
Cal-Tronics Corp.
Chatillon & Sons
Computer-Measmts. Corp.
Consolidated Avionics
Control Devices, Inc.
Corbett Science Labs.
Counter & Control Corp.
Detectron Co.
Durant Mfg.
Dynapar Corp.
Eagle Signal Corp.
Electrical Devel.
Electro-Pulse, Inc.
Electro-Tech Equip.
Endevco Corp.
Engrg. Research
Ferrara, Inc. Co.
Fischer & Porter Co.
Freed Transf. Co.
Genisco, Inc.
General Controls
Heat Timer Corp.
Hetherington, Inc.
Hunter Mfg. Co.
Hupp Instrumentation
I-L-S Instr. Corp.
Indust. Electronic Conts.
Industrial Electronics, Inc.
Jessup Engrg. & Devel.
Kellogg Switchboard
Landis & Gyr
Machinery Electrification
Marconi Instruments
Metrotype Corp.
Nader Mfg.
Nemeth Labs.
North Amer. Philips
Nucleonic Corp.
Nucleonic Corp. of Amer.
Penn Insts. Div.
Photobell Co.
Photocon Research Prods.
Post Machinery Co.
Potter Aeronaut. Co.
Potter Instr. Co.
Probescope Co.
Production Instr. Co.
Ram Meter, Inc.
Ransom Research
Raycon Corp.
Richardson Scale
Scientific Specialties
Special Instruments Lab.
Spellman Television
Standard Elect. Time
Streeter-Amet
Systron Corp.
Taller & Cooper
Telechron Dept.
Veeder-Root
Walkirt Co.
Weighing Components
Westport Electric
Westronics, Inc.
Wilson & Co.

NEURON COUNTERS

- Versatility: **Maximum**
- Cost: **Moderate**
- Electrical Reset
- Push-Button Reset
- Preset Switch Bank
- To 60 counts/sec.

Three models with numerous modifications give NEURON counters versatility engineered for a wide range of control problems. Models are available as add-only, subtract-only and add-subtract totalizers. NEURON switch-readout and pre-determined switch counters accomplish control functions while they count. Life in excess of 300 million counts. Write for complete technical data.

Manufactured by

Autron ENGINEERING, INC.

1254 WEST SIXTH STREET, LOS ANGELES 17 • MUTUAL 3237

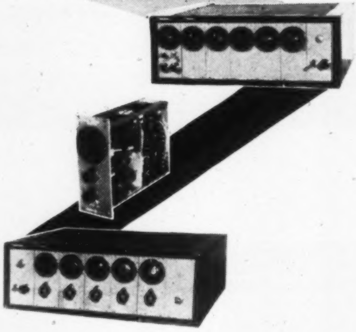
For more information circle **101** on inquiry card.

You get

FLEXIBILITY and VERSATILITY

with Baird-Atomic's

TOTALIZERS and PRESET COUNTERS



BAIRD-ATOMIC plug-in unitized construction provides a wide range of custom equipment at *standard equipment* costs. Other features of this design are:

- Operational reliability
- Rapid replacement
- Simplified maintenance

Totalizers provide accurate and automatic counting of discrete items, events and units of linear measure or volume . . . counting by units, dozen and gross . . . counting speeds up to 20,000 c.p.s.

Preset counters for automatic production control are made in single and dual preset . . . provide pre-selection of the count at which some production operation can automatically be activated. Available in counting speeds up to 2,000 c.p.s. . . . locking or momentary output relays . . . batching register . . . pulse or contact inputs available.

Totalizers and control equipment can be supplied in individual plug-in strips, complete cabinet systems, or standard rack mounting systems. Cabinets contain 5, 6, 7, or 8 plug-in strips according to model. Each cabinet has built-in, tubeless, line-voltage regulated power supply.

Baird Atomic

Write for technical bulletin.

Baird-Atomic, Inc.
Cambridge, Mass. USA

For more information circle **102** on inquiry card.

COUNTERS, Radiation, see Counters, Geiger-Mueller, also Radioactivity Instruments

COUNTERS, Revolution
Adde & Co.
Alcor Electronics
Anatran Engrg. Corp.
Autom. Timing & Controls
Baird-Atomic
Barbour Stockwell
Bereley Div.
Boulin Instr. Corp.
Bowmar Instr. Corp.
Bristol Co.
Brown & Sharpe
Coleman Engrg. Co.
Computer-Measmts. Corp.
Consolidated Avionics
Cook Electric
Counter & Control Corp.
Cummings Mach. Wks.
Cyclotron Specialties
Dayton Instruments
Detectron Co.
Dittmore & Freimuth
Dormitzer Electric
Durant Mfg. Co.
Eagle Signal Corp.
Elect. Tachom. Corp.
Electro-Pulse, Inc.
Electro-Tech Equip.
Endevco Corp.
Engler Instr. Co.
Engrg. Res. & Devel.
Freed Transf. Co.
GE, Apparatus Sales
General Radio
Genisco, Inc.
Gordon Enterprises
Greiner Co., Emil
Gurley, W. & L. E.
Hart Mfg. Co.
Hasler-Tel Co.
Henschel Corp.
Hupp Instrumentation
Ideal Commutator
Industrial Elect. Controls
Industrial Timer Corp.
I-L-S Instr. Corp.
Jaeger Watch
Johnson Co., E. F.
Jones Motrola Corp.
Kearfott Co.
Krohn-Hite
Marx Co., Clarence T.
Mason-Neilan Div.
McDonnell Odometer
Millen Mfg. Co.
Millers Falls Co.
Moisture Register Co.
Mueller Laboratory
Pacific Scientific
Photocon Research
Potter Aeronaut. Corp.
Potter Instr. Co.
Production Instr. Co.
Ram Meter, Inc.
Ransom Research
Raycon Corp.
Redington Co.
Richardson Scale
Royson Engrg. Co.
Scherr Co.
Std. Elect. Time Co.
Starrett Co., L. S.
Streeter-Amet
Sticht Co., Herman H.
Sun Electric
Sunshine Scientific
Systron Corp.
Taller & Cooper
Tech. Oil Tool Corp.
Telecomputing Corp.
Veeder-Root, Inc.
WacLine, Inc.
Walkirt Co.
Warren-Knight
Westport Electric
Zernickow Co.

COUNTERS, Scintillation (see also Radioactivity)
Alpine Labs. Ltd.
Amer. Electronics
American Tradair Corp.
Anton Electronics Labs.
Baird-Atomic
BJ Electronics
Berkeley Div.
Beva Laboratory
Chatham Electronics
Corbett Science Labs.
Curtiss-Wright
Daystrom Instrument
Detectolab, Inc.
Detectron Co.
Douglas Radio Labs.
Electronic & Engrg. Serv.
El-Tronics, Inc.
Fisher Res. Lab.
Forro Scientific
GE, Apparatus Sales
Hamner Electronics
Hansen Co., Wm.
Hewlett-Packard
Kaye Devel. Co.
Levinthal Electron. Prods.
Librascope, Inc.
Menlo Research Lab.
Mt. Sopris Instr. Co.
NRD Instr. Co.
Natl. Radiac, Inc.
North Amer. Philips Co.
Nuclear-Chicago
Nuclear Corp. of Amer.
Nuclear Measmts. Corp.
Nuclear Research Corp.
Nuclear Science & Engrg.
Nucleonic Co.
Packard Instr. Co.
Potter Instr.
Prec. Radiation Insts.
Radiation Counter Labs.
Radiation Instr. Devel. Lab.
Radiation Res. Corp.
Radioactive Prods. Inc.
Stratex Inst.
Technical Associates
Telecomputing Corp.
Tracerlab Inc.
Universal Transistor
Victoreen Instr. Co.
Western Radiation Lab.
Wood Counter Lab., N.

COUNTERS, Time, see Timers

COUNTERS, Vehicular
Aero Instr. Co.
Aristo Import Co.
Barbour-Stockwell
Computer-Measmts. Corp.
Corbett Science Labs.
Dittmore & Freimuth
Engler Instr. Co.
GE
Presin Co.
Stoelting Co.
Streeter-Amet
Taller & Cooper
Veeder-Root

COUPLERS, Directional, see Microwave Instrumentation

COUPLINGS, see Fittings, Tube

COURSE PROTRACTORS, see, Protractors, Course

COVERS, Instrument, including Dustproof and Waterproof (see also Cases)
Alpine Labs. Ltd.
Amer. Hard Rubber Co.
Bausch & Lomb
Bel-Art Products
Blossom Mfg.
Brooks & Perkins
Bud Radio, Inc.
Carroll Co., J. B.
Churchill Lighting
Conn-Craft Co.
Daniels, Inc.
Dearborn Glass Co.
DuBois Engrg. & Mfg.
Fisher Scientific
Harris Mfg. Co.
Instrument Cases Inc.
Instruments Inc.
Insuline Corp. of Amer.
Jadow, Inc.
Lancaster Glass
Lewyt Corp.
Nelson Electric Mfg.
Potter & Brumfield
Printloid Corp.
Reiner Electronics Co.
Regal Plastic Co.
Remington-Rand Univac
Remler Co.
Scientific Instr. Co.
Swanson Engrg.
Trerice Co.
U. S. Rubber
Valley-National
Vulcan Rubber Prods.
Waldom Electronics
Warwick Prods. Co.
Watertown Mfg.
Zero Mfg. Co.

CRIMINOLOGY LABORATORY APPARATUS (see also Polygraphs)
Alpine Labs. Ltd.
Amer. Instr. Co.
Amer. Optical Instr.
Applied Research Labs.
Baird-Atomics
Bausch & Lomb
Beckman Div.
Eitzen Co., Louis C.
Fisher Scientific
Greiner, Emil
Hanovia Chem. & Mfg.
Jarrell-Ash
Menlo Research Lab.
Scient. Inst. Dev. Lab.
Stoelting Co.
Ultra-Violet Prods.

CRYOSTATS
Farnsworth Electronics
Perkin-Elmer

CRYPTOMETERS, Paint
Bausch & Lomb
Drage Products
Gardner Lab.
Koehler Instr. Co.

CRYSTAL DIODES
Amperex Electronics
Bendix Aviation Corp.
Centralab Div.
Fretco, Inc.
GE, Electronics Div.
Germanium Prods. Corp.
Hughes Prods. Div.
Intelex Systems
International Rectifier
Kemtron Electron Prods.
Microwave Assocs.
Newark Electric Co.
Pac. Semiconductors, Inc.
Radio Receptor Co.
Raytheon Tube Div.
State Labs., Inc.
Sylvania Elect. Prods.
Transitron Electronic Corp.

CRYSTAL ELECTRODES
Constantin & Co., L. L.
Fineisen, A. R.
Premier Res. Labs.
Sylvania Elect. Prods.
Valpey Crystals

CRYSTAL GROWING EQUIPMENT
Fretco, Inc.
General Transistor Corp.
Kahle Engrg. Co.
Minn-Honeywell, Indus. Div.
NRC Equip. Corp.
Single Crystal Corp.
Temperature Engrg.

CRYSTAL HOLDERS
Admittance-Namco
Airtron, Inc.
Amer. Electronic Labs.
Centralab Div.
Corning Glass Works
Constantin & Co.
Diamond Mfg. Corp.
Electrical Industries, Inc.
Grayhill
Hermetic Seal
Insuline Corp.
Johnson Co., E. F.
Millen Mfg. Co.
Molded Insulation Co.
Premier Res. Labs.
Sierra Electronic
Sylvania Elect. Prods.
U. S. Gasket Co.

CRYSTALS, Barium Titanate
Bendix-Pacific
Branson Instruments
Brush Electronics
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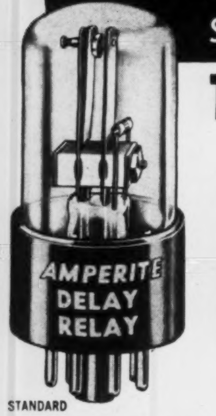

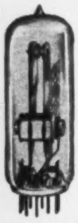

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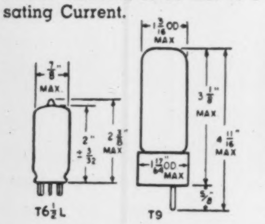

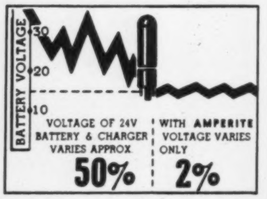

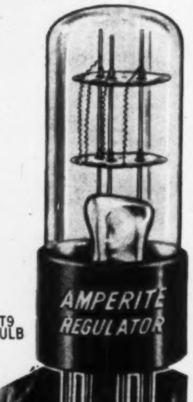

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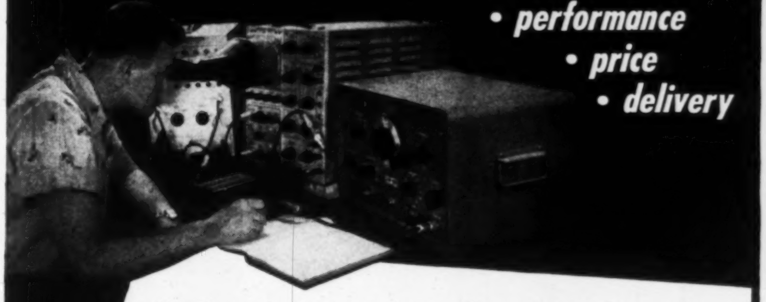

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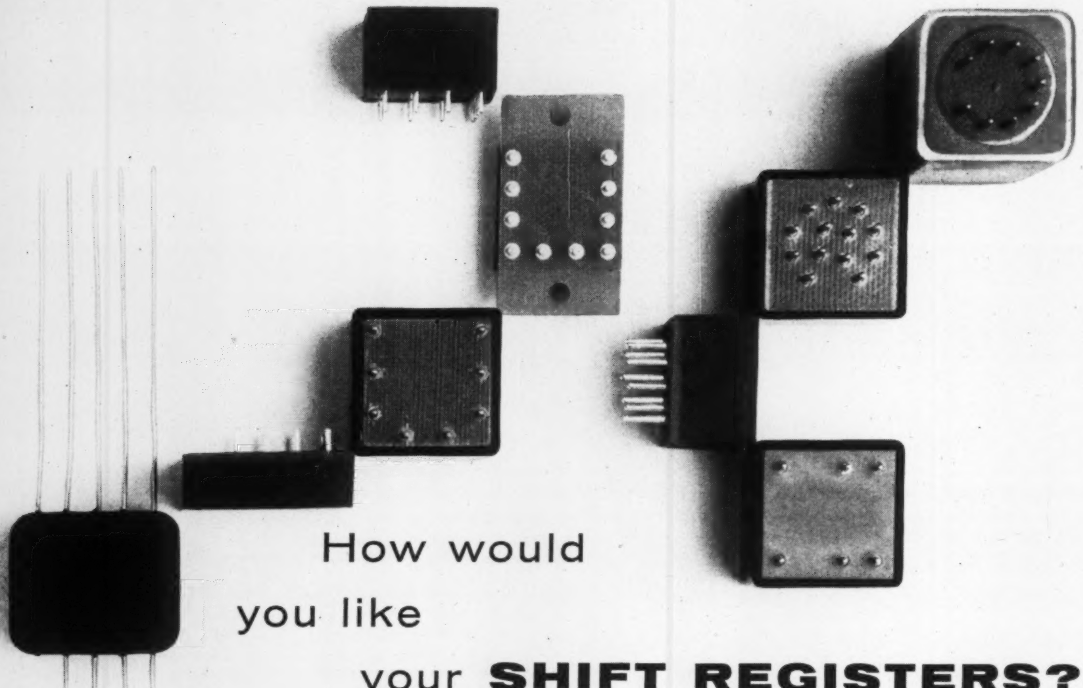

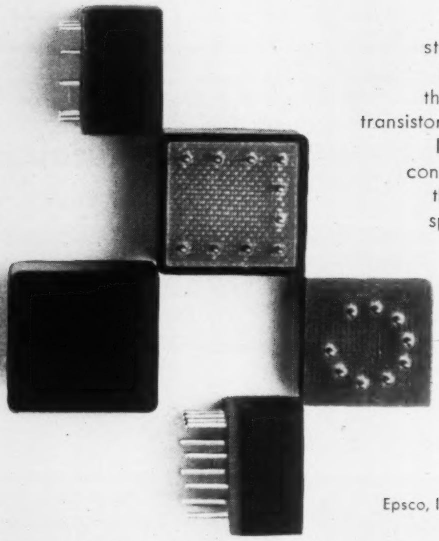

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Davidson Mfg. Co.
Dearborn Gage Co.
Dearborn Scientific
Decker Aviation
Deltronic Corp.
Deming Indicator
Detecto Scales
Dice Co.
Dixon, Inc.
DoAll Co.
Donner Scientific
Edin Electronics
Eitzen Co.
Electro Products Labs.
Electronic Control Systems
Electronic Controls, Inc.
Electronic Products Co.
Elgin Natl. Watch
Engineers Specialty Div.
Engis Equipt. Co.
Ercona Corp.
Esterline Angus
Exact Weight Scale
Federal Prods. Corp.
Ferner Co.
Fielden Instr. Div.
Fischer & Porter
Fonda Gage Co.
Forro Scientific
Foxboro Co.
Gaertner Scientific
Gardner Lab.
Gem Instrument
Genales, Andres
General Cybernetics
GE, Apparatus Sales
GE, Metall. Prods. Dept.
GE, X-Ray Corp.
Gilmore Industries
Glogau & Co.
Gordon Co., Claud S.
Graham-Mintel Instr.
Greenfield Tap & Die
Griswold Mfg. Co.
Gulton Industries
Hanson-Gorrill-Brian
Hathaway Instr. Co.
Hays Corp.
Henson Co.
Hillyer Instr.
Hirschmann Co.
Ideal- Aerosmith
Ill. Testing Labs.
Ill. Tool Works
Indicating Calipers Co.
Indust. Electronics (Mass.)
Industrial Electronics
Industrial Gauges Corp.
Industrial Nucleonics
Industrial Prods. Div.
Industrial Devel. Labs.
Instruments, Inc.
Jadow, Inc.
Jan Hardware Mfg.
Jansson Gage Co.
Jerpbak-Bayless
Jessup Engrg. & Devel.
Johnson Gage Co.
Kahn & Co.
King Instrument Co.
Koehler Instr. Co.
Krouse Testing Machine
Lawrence & Hill
Leupold & Stevens
Lewis Engrg. Co.
Lincoln Park Tool
Link Engrg. Co.
Lufkin Rule Co.
M & G Instr. Co.
Magnaflux Corp.
Magnetic Gauge Co.
Manning, Maxwell & Moore
Marsh Corp., Jas. P.
Marshall Co.
Maveg Machine Sales
Merz Engrg. Co.
Metron Instr.
Metzger & Son
Micro-Master Co.
Micro Metrical Mfg.
Millers Falls Co.
Minatron Corp.
Moore Products
Morse Co., H. E.
Mueller Lab.
Munsell Color Co.
Myer Corp.
National Broach & Mach.
Neise, Karl A.
Nilsson Gage Products
North Amer. Instr.
North Amer. Philips
Nuclear Corp. of Amer.
Nuclear Research
Ohmart Corp.
Optical Gaging Prods.
Opto-Metric Tools
Orban Co., Kurt
Perkin-Elmer
Petrometer Corp.
Phoenix Prec. Instr.
Photocon Research
PIC Design Corp.
Poole Instruments
Portman Instr. Co.
Pratt & Whitney
Precision Gage & Tool
Precision Scientific
Prec. Thermom. & Insts.
Progressive Service Co.
R. & M. Mfg. Co.
Radial Metal Prod.
Radioactive Prods. Inc.
Reliable Instr. Co.
Republic Gage Co.
Reliant Industries
Rimat Gage Co.
Rimat Tool Co.
Robertshaw-Fulton
Rochester Mfg. Co.
Rockwell Engrg. Co.
Rowe Engrg. Co.
Rutico, Inc.
Ryan Tool & Engrg.
Schaevitz Engineering
Scherr Co.
Scherr Optical Tools
Scientific Enterprises
Scientific Instr. Co.
Scott Testers
Servonic Insts.
Sheffield Corp.
Simplex Valve & Meter
Simpson Electric
Size Control Co.
Slocomb Co.
Spiedel & Co.
Sperry Products
Standard Electric
Standard Electronic
Standard Gage Co.
Starrett Co.
Statham Co.
Stocker & Yale
Streeter-Amet
Sturdy Tool & Gage
Summers Gryoscope
Sunshine Scientific
Swedish Gage
Taft-Peirce
Taper Micrometers
Telectronics Labs.
Tensitron Inc.
Testing Machines, Inc.
Three Point Industries
Thwing-Albert
Ti-Pi Co.
Toledo Scale Co.
Tracerlab Inc.
Trerice Co., H. O.
Trimount Instr. Co.
U. S. Expansion Bolt
U. S. Radium Co.
Union Tool Co.
United Engineers
United Prec. Prods.
Van Keuren Co.
Vapor Recovery Systems
Victor Laboratory
Viking Instruments
Vinco Corp.
Wallace & Tiernan
Waltham Dial Gage
Warner & Swasey Res.
Warren-Knight
Webber Gage Co.
Weksler Thermom. Corp.
Welch Mfg. Co., W. M.
West & Dodge Thread
Whittington Pump
Wiancko Engrg. Co.
Wilmotte, Inc.
Woodworth Co.
Worley Jewel Co.
Zeiss, Inc., Carl

DIMENSIONAL GAGES, Optical including Comparators, Interferometers, Micrometers, Projectors, Telescopic

Abrams Instr. Co.
Acme Industrial
Acme Scientific
Align-A-Scope, Inc.
Alpha Amer. Corp.
Amer. Instr. Co.
Amer. Meas. Instr.
Amer. Optical
Ann Arbor Instr. Works
Arizona Tool & Die Co.
Askania Reg. Co.
Askania-Werke A. C.
Avion Div.
Bachmann Co., Eric R.
Baird-Atomic
Bausch & Lomb
Bell & Howell
Bray Optical
Bristol Co.
Bronoptics Co.
Brown & Sharpe
Brush Electronics
Cambridge Instr. Co.
Carroll Co.
Clark & Sons
Coleman Engrg. Co.
Compar Instr. Co.
Cal-Astro Optical Labs.
Cambridge Thermionic
Custom Scientific Insts. Inc.
Davidson Mfg.
Dixon Inc.
DoAll Co.
E & S Optical
E & W Optical
Eder Instr. Co.
Edmund Scientific
Electro-Mec Lab.
Electronic Res. Labs.
Electronic Spec. Co.
Engineers Specialty Div.
Engis Euipt. Co.
Ercona Corp.
Farnsworth Electronics
Farrand Optical
Fecker, Inc.
Federal Prods. Corp.
Ferner Co.
Fish-Schurman
Gaertner Scientific
Gage Co.
Gordon Enterprises
Graf-Apsco
Griswold Mfg.. Co.
Gurley, W. & L. E.
Hacker & Co.
Hausser & Son
Helio Instr. Co.
Henson Co.
Hillyer Instr. Co.
Hirschmann Co.
Hyde Instr. Co.
Instrument Devel. Labs.
Instrumentation Assoc.
Jarrell-Ash
Jones & Lamson Mach.
Keuffel & Esser
Kollmorgen Optical
Lab. Optical
Leitz Inc
Lenox Instrument Co.
Link Aviation
Lufkin Rule Co.
Mason Instr. Co.
Menlo Research Lab.
McPherson Prec. Insts.
Meyer-Opticraft
Natl. Instr. Co.
Opplem Co., Inc.
Optical Development Corp
Optical Gaging Prods.
Opto-Metric Tools
Optron Lab.
Palos Optical
Pan-technics, Ltd.
Penn Optical & Instr.
Perkin-Elmer
Phoenix Prec. Instr.
Photogrametry, Inc.
Polarizing Instr. Co.
Portman Instr. Co.
Pratt & Whitney
Precision Scientific
Radial Metal Prod.
Rimat Gage Co.
Rudolph & Sons
Ruska Instr. Corp.
Scherr Optical Tools
Schneider-Cogswell
Sheffield Corp.
Std. Electronic Res.
Stocker & Yale
Swedish Gage
Testing Machines, Inc.
Tinsley Labs.
Unertl Optical
Van Keuren Co.
Webber Gage Co.
Wild Heerbrugg
Wilder, Inc.
Zeiss, Inc., Carl

DIMENSIONAL GAGES, Pneumatic, including Comparators

Dearborn Gage Co.
Federal Prods. Corp.
Gaertner Scientific
Moore Products
Pratt & Whitney
Rimat Gage Co.
Sheffield Corp.
Swedish Gage
Taft-Peirce

DIMENSIONAL GAGES, Surface Finish, including Surface Indicators

Acme Industrial
Alina Corp.
Amer. Meas. Insts.
Amer. Optical
Ames Co.
Arlin Products
Autom. Timing & Controls
Bausch & Lomb
Blake Co.
Bristol Co.
Brown & Sharpe
Brush Electronics
Buehler, Ltd.
Clevite Res. Center
Compar Instr. Co.
Comtor Co.
Con-Ray Corp.
Dearborn Gage Co.
DoAll Co.
Edin Electronics
Electric Eye Equipt.
Electronic Prods. Co.
Engis Equipt. Co.

Non Destructive and Physical Testing and Measuring Instruments for

quality control

CARSON-DICE ELECTRONIC MICROMETERS

Direct measurement of thickness to .000020—not a comparator. Pressureless measurement—eliminates "feel" as a source of error. Applicable to hard or soft materials, conducting or nonconducting. Unaffected by temperature, vibration, leveling or aging of tubes. Hand operated and automatic motor driven models available.

METAL SORTERS

Automatic or manual high-speed sorting of metal parts by 10 metallurgic characteristics. Insures uniform quality, sorts up to 300 pieces per minute. Salvages mixed lots non-destructively, and is applicable to raw stock, semi-finished or finished parts—any size.

ULTRASONIC METROSCOPE

Measures wall thickness from one side only. Detects internal defects non-destructively in sheet, plate, and flat stock. Locates imperfect bond between clad metals.

MICROHM METER

Measures electrical resistances as low as 1 Microhm (.000001 ohms). Portable, 5 range instrument for field or shop use. 2% accuracy. Self-contained power supply. Measures contact resistance in large circuit breakers without disassembly. Quality control of small electrical assemblies and for inspection of incoming raw materials. Basic instrument for checking "cleanliness" of aluminum prior to spot welding.

METAL DETECTORS

For high speed automatic detection of tramp metal particles in food, plastics, paper, rubber, textiles, coal, crushed stone and many other products.

and many other testing and measuring instruments.
Whatever your test problems
WRITE DICE

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HYDRAULIC
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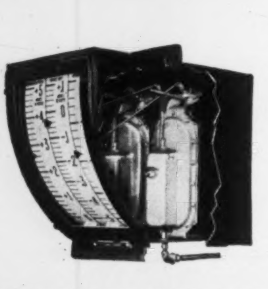
RESISTANCE
MAGNETIC
HYDROSTATIC
DUCTILITY
INSULATION
METAL DETECTORS
X-RAY
SPRING
MICROMETER

J. W. DICE COMPANY
16 HIGHWOOD AVENUE
ENGLEWOOD, N. J.

For more information circle **108** on inquiry card.



BAILEY MULTI-POINTER GAGES

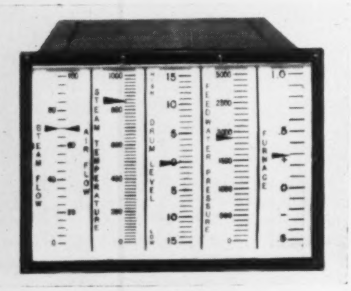
• From one to twelve pointers and any scale combination are provided by the Bailey Multi-Pointer Gage. The pointers have 10 in. motion over plainly marked, plastic molded scales so that readings can be taken at a distance of 20 feet. Diaphragm actuated elements enable this gage to withstand over-drafts and over-pressures without injury to the unit or its calibration.

All secondary factors such as draft, pressure, temperature, stoker speed, and pulverizer feed can be indicated on one Bailey Multi-Pointer Gage.

Request Product Specification M42-1

BAILEY METER COMPANY
1041 IVANHOE ROAD CLEVELAND, O.
Bailey Meter Company Ltd., Montreal, Canada

For more information circle 109 on inquiry card.



REPUBLIC DRAFT GAGES

New V5 Series with 5-in. illuminated scales for measuring draft, pressure, gas differential, vacuum and temperature. May also be used as receiver for pneumatic transmitters.

Compact size saves space without sacrificing performance. Full sized diaphragms, bellows and helixes used for accuracy and sensitivity. Units may be mounted singly or in multiple case. Interchangeable, easily removed and replaced without disturbing others.

WRITE FOR BULLETIN 806

REPUBLIC FLOW METERS CO.
2240 Diversey Pkwy. Chicago 47, Ill.

REPUBLIC
INSTRUMENTS • CONTROLS

For more information circle 110 on inquiry card.

Ercona Corp.
Federal Prods. Corp.
Fielden Instr. Div.
Gar Prec. Parts, Inc.
GE, Apparatus Sales
Genales, Andres
Hirschmann Co.
Industrial Electronics
Jansson Gage Co.
Kaye Devel. Co.
Link Engrg. & Mfg.
Lufkin Rule Co.
Micrometrical Mfg.
Millers Falls Co
National Instr. Co.
Nilsson Gage Products
Opplem Co.
Opto-Metric Tools
Optron Lab.
Orban Co., Kurt
Palos Optical Co.
Penn Optical & Instr.
Perkin-Elmer
Phototron Instr. Corp.
Physicists Res. Co.
Precision Scientific
Robertshaw-Fulton
Schaevitz Engineering
Scherr Co.
Scherr Optical Tools
Sheffield Corp.
Simpson Electric
Size Control Co.
Std. Gage Co.
Starrett Co.
Stocker & Yale
Sturdy Tool & Gage
Surface Checking Gage
Swedish Gage
Taper Micrometers
Thwing-Albert
Whittington Pump
Williamson Devel. Co.
Zeiss, Inc., Carl

DIODE TEST SETS

Amer. Mach. & Foundry
Berkshire Labs.
Cubic Corp.
Datascan Inc.
Davenport Mfg.
El Mec Labs
Franklin Electronics
Fretco, Inc.
General Electronic
Hydro-Aire Inc.
Kahle Engrg. Co.
Kay Electric
Manson Labs.
Magnetic Amplifiers, Inc.
Monroe Calc. Mach. Co.
Neutronics Research
Northam Electronics
Pacific Semiconds, Inc.
Polyphase Instr.
Radio City Products
Reiner Electronics
Scientific Specialties
Sonex, Inc.
Technitrol Engrg. Co.
Tarc Electronics
Teletronics Lab., Inc.
Wallson Associates
Waters Mfg.
Westronics, Inc.

DIODES, Germanium

Amperex Electronic
Arnhold Ceramics
Bendix Aviation Corp.
Berkshire Labs.
Bogue Electric Mfg.
CBS-Hytron Div.
Centralab Div.
Engineered Electronics
GE, Electronics Div.
Hughes Prods. Div.
Hydro-Aire, Inc.
Industro, Inc.
Intelex Systems
International Rectifier
Kemtron Electron Prods.
Lansdale Tube Co.
Lectronic Research
Newark Electric Co.
Pac. Semiconducters, Inc.
Philco Corp.
Radio Dev. & Res.
Radio Receptor
Raytheon Tube Div.
Scientific Specialties
Sylvania Elect. Prods.
Transitron Electronic
Tung-Sol Electric
Westinghouse Electric

DIODES, Silicon

Amperex Electronic
Bogue Electric Mfg.
Bomac Labs.
CBS-Hytron Div.
Centralab Div.
Fansteel Metallurgical
GE, Electronics Div.
Hughes Prods. Div.
Hydro-Aire
Industro, Inc.
Intelex Systems
International Rectifier
Kemtron Electron Prods.
Lectronic Research
Microwave Assocs.
Natl. Aircraft Corp.
Newark Electric Co.
Pac. Semiconductors
Philco Corp.
Radio Dev. & Res.
Radio Receptor
Raytheon Tube Div.
Sarkes Tarzian, Inc.
Sylvania Elect. Prods.
Texas Insts. Inc.
Thermosen, Inc.
Transitron Electronic
Tung-Sol Electric
Westinghouse Electric

DIRECTION INDICATORS, Radio-actuated (see also Aircraft Instruments, also Navigation Aids)

Aircraft Radio Corp.
Avion Div.
Bendix Aviation Corp.
Bendix, Eclipse-Pioneer
Engrg. & Res. Corp.
Kearfott Co.
Lear, Inc.
Radio City Products

DISPLACEMENT INDICATORS and/or RECORDERS, Linear Motion

Aero Electronics
Airborne Instruments
Airflo Instr. Co.
Alden Products
Alfax Paper & Engrg.
Allis-Chalmers
Amer. Electronic Mfg.
Annis Co.
Arma Corp.
Arnoux Corp.
Assembly Products
Askania-Werke, A. G.
Austin Co.
Autocall Co.
Automatic Electric
Autom. Timing & Controls
Avion Div.
Bailey Meter Co.
Barber-Colman
Bendix Aviation Corp.
Berkely Div.
Boston Auto Gage Co.
Bourns Labs.
Bristol Co.
Brown & Sharpe
Brush Electronics
Builders-Providence
Century Geophysical
Cleveland Instrument
Colvin Labs., Inc.
Computer Instr. Corp.
Consolidated Avionics
Crescent Engrg. & Res.
Daystronic Corp.
Dickson Co.
Donner Scientific
Edcliff Instruments
Electric Indicator Corp.
Electric Speed Ind. Co.
Elect. Tachom. Corp.
Electro Products Labs.
Electronic Assoc.
Endevco Corp.
Epsco, Inc.
Esterline-Angus
Fielden Instr. Div.
Foxboro Co.
GE, Apparatus Sales
General Radio Co.
Genisco, Inc.
Giannini & Co.
Gilmore Industries
Gorrell & Gorrell
Graydon Smith Prods.
Gurley, W. & L. E.
Gyroscopics, Inc.
Hagan Chem. & Controls
Hays Corp.
Henschel Corp.
Hickok Electcl. Instr.
Indikon Co.
Insco Company
Instruments Corp.
Internat. Res. & Dev. Corp.
Kearfott Co., Inc.
Kistler Instr. Corp.
Knopf Instr. Co.
Larson Instr. Co.
Lear, Inc.
Leupold & Stevens
Manning, Maxwell & Moore
Mason-Neilan Div.
Massa Labs.
Minatron Corp.
Minn-Honeywell, Boston Div.
Neutronics Research
Non-Linear Systems
Norden-Ketay
Northam Electronics
Optron Corp.
Orban Co., Kurt
Pacific Scientific
Performance Measmts.
Phoenix Prec. Inst
Photocon Research
Potter Instr. Co.
RCA Div.
Republic Flow Meters
Robertshaw-Fulton
Roller-Smith
Sanborn Co.
Schaevitz Engineering
Seismograph Service
Servomechanisms, Inc.
Servo Tek Products
Shallcross Mfg.
Sperry Gyroscope
Swartwout Co.
Tejax Engrg. Co.
Teller Co.
Topp Industries
Triplett Electcl. Instr.
United Control
Vectron, Inc.
Vibr. Measmt. Engrs.
Virginia Electronics
Wang Labs., Inc.
Weston Electrical Instr.
Wiancko Engrg. Co.

DISPLACEMENT INDICATORS and/or RECORDERS Angular and Nonlinear and Motion

Aero Electronics
Askania-Werke, A. G.
Bristol Co.
Brush Electronics
Colvin Labs.,
Consolidated Avionics
Crescent Engr. & Res. Co.
Davidson Mfg.
Elect. Tachometer Corp.
Electro Products
Fielden Instr. Div.
General Radio Co.
Giannini & Co.
Henschel Corp.
Industrial Electronics
Kistler Instr. Corp.
Manning, Maxwell & Moore
Neutronics Research
Non-Linear Systems
Orban Co., Kurt
Phoenix Prec. Inst.
Potter Instr. Co.
Teller Co.
Trerice Co., H. O.
Wang Labs., Inc.

DISPLACEMENT PICK-UPS, Capacitance Type

Decker Aviation Corp.
Fielden Inst. Div.
Kistler Instr.
Medical Electronics Dev.
Micro Gee Prods.
Minatron Corp.
Sheffield Corp.
Statham Laboratories
Ultradyne Engrg. Labs.
Wiancko Engrg. Co.

DISPLACEMENT PICK-UPS, Differential Transformer Type

Autom. Timing & Controls
Bristol Co.
Cleveland Instrument
Control Components Co.
Crescent Engrg. & Res.
Daystrom-Pacific
Daytronic Corp.
Fielden Instr. Div.
Gyroscopics, Inc.
Hagan Chem. & Controls
Industrial Electronics
Magnetic Instr. Co.
Minatron Corp.
Sanborn Co.
Sheffield Corp.
Swartwout Co.
Tensitron, Inc.

DISPLACEMENT PICK-UPS, Magnetic, including Variable Reluctance

Altec Lansing
American Gryo Corp.
Control Components Co.
Consol. Electrodynamics
Crescent Engrg. & Res. Co.
Daystrom-Pacific
Electro Products Labs.
Electro-Voice
Gyroscopics, Inc.
Internat. Res. & Devel.
Lab-Tronics
Land-Air, Inc.
Magnovox Co.
Miller Instruments
Minatron Corp.
Northam Electronics
Potter Aeronaut. Corp.
Potter Instr. Co.
Tensitron, Inc.
Wiancko Engrg Co.

DISPLACEMENT PICK-UPS, Resistive

Askania-Werke A. G.
Amer. Gryo Corp.
Bourns Labs.
Bristol Co.
Colvin Labs.
Consolidated Avionics
Daystrom-Pacific
Dynamic Instrument
Edcliff Instruments
Electro-Mec Lab.
Electro Mechanical Div.
Electronic Engrg. Assocs.
Galetronics, Inc.
General Scientific
Giannini, G. M.
Lab-Tronics
Markite Co.
Pacific Scientific
Polyphase Instr.
Servonics Instruments
Statham Labs.
Task Corp.

DISSOLVED-OXYGEN RECORDERS, see Gas Analyzers

DISTILLATION APPARATUS (see also Laboratory Apparatus)

Ace Glass
Aetna Scientific Co.
Amer. Instr. Co.
Amersil Co.
Apex Scient.
Baird-Atomic
Burrell Corp.
Cannon Instr.
Consol. Electrodynamics
Con. Electrolyn., Roch.
Corning Glass Works
Distillation Products
Electric Hotpack
Fisher Scientific
Friedrich & Dimmock
Glass Engrg. Labs.
Grain Lab. Equipt. Co.
Greiner, Emil
Greiner Glassblowing Lab.
Kimble Glass Co.
Koehler Instr. Co.
Kontes Glass
Labline, Inc.
Macalaster Bicknell
Owens-Illinois
Penfield Mfg.
Phila. Scientific Glass
Phoenix Prec. Inst.
Podbielniak, Inc.
Prec. Glass Prods.
Precision Scientific
Process & Instruments
R. K. L. Valve & Mfg.
Research Appl. Co.
Rudolph & Sons
Scientific Glass App.
Smith Co., Arthur F.
Sorvall Inc.
Technical Equipt. Co.
Todd Scientific
Uhrig Co.,
Wakefield Industries

DISTORTION METERS

Advance Electronics
Audio Instr. Co.
Boonton Electronics
Brush Electronics
Daven Co.
Dyna-Empire, Inc.
Empire Devices
Federal Telephone & Radio
Freed Transf. Co.
General Electronic
General Radio Co.
Hewlett-Packard
Hickok Elec. Instr.
Indust. Test. Equipt. Co.
Kay Electric
Marconi Instruments
RCA Div.
Scott, Inc., Hermon
Sierra Electronic Corp.

DIVIDERS Voltage, Decade, see Resistance Boxes

DIVIDING HEADS, Optical

Amer. Meas. Insts.
Davidson Mfg.
Engis Equipt. Co.
Ercona Corp.
Fecker, Inc., J. W.
Ferner Co.
Gaertner Scientific
Griswold Mfg. Co.
Gurley, W. & L. E.
Helio Instr. Co.
Hillyer Instr. Co.
Jarrell-Ash
Kollmorgen Optical
Opto-Metric Tools
Scherr Optical Tools
Vinco Corp.
Webber Gage Co.
Zeiss, Inc., Carl

DIVIDING MACHINES, see Machines, Dividing

DOSIMETERS, see Radioactivity

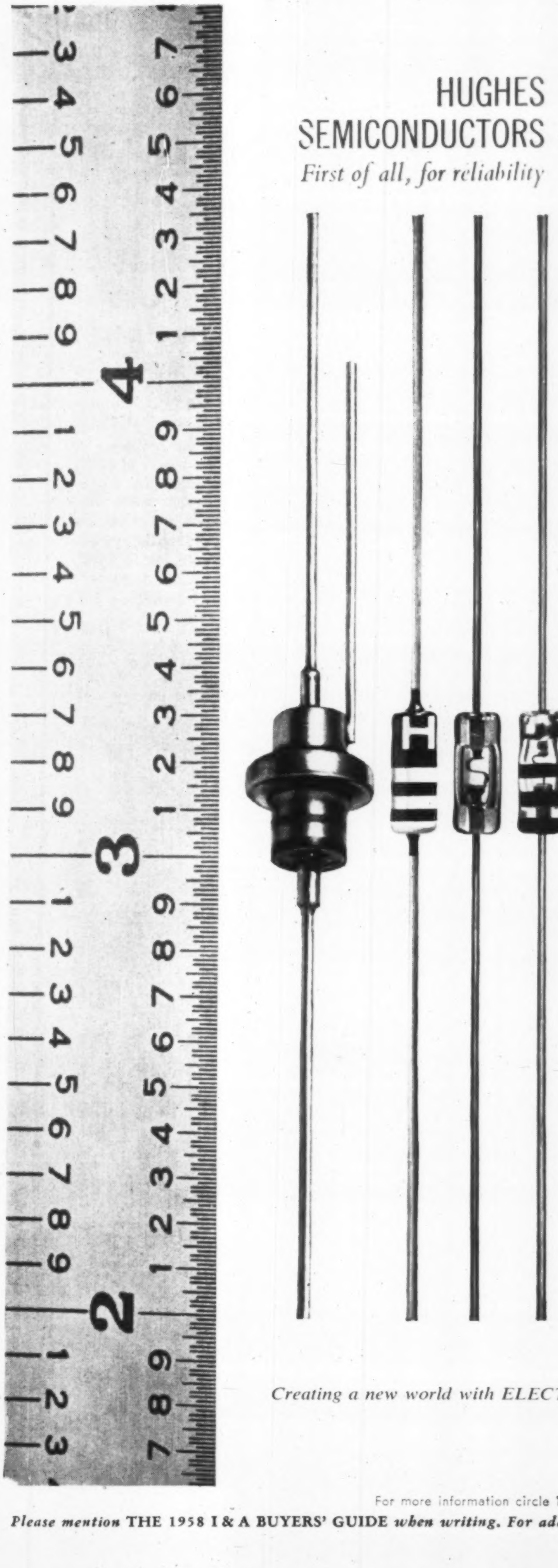
DRAFT INSTRUMENTS (see also Boiler Room Instruments, also Pressure)

A-P Controls Corp.
Askania Reg. Co.
Atlas Valve Co.
Autom. Temp. Contr. Co.
Barcharach Indust. Instr.
B-I-F Industries
Bailey Meter Co.
Barber-Colman
Beck Co.
Berger Scient. Sups.
Bristol Co.
Cash Co., A. W.
Cassell Co., John R.
Cleveland Fuel Equipt.
Climax Div.
Defender Instr. & Reg.
Denver Fire Clay Co.
Dietz Co., Henry G.
Dwyer Mfg., F. W.
Ellison Draft Gage
Foster Engrg. Co.
Foxboro Co.
Fuess, Inc.
General Controls
General Regulator Corp.
Gleason-Avery
Hagan Chem. & Controls
Hammel-Dahl
Hays Corp.
Leeds & Northrup
Mason-Neilan Div.
Meriam Instr. Co.
Minneapolis-Honeywell
Moore Products Co.
National Airoil Burner
Natural Gas Equipt. Co.
Perfex Controls Div.
Pitometer Log Corp.
Preferred Utilities Mfg.
Reliance Instr. Mfg.
Republic Flow Meters
Schade Valve Mfg.
Seely Instr. Co.
Shallcross Controls
Soreng Products
Taylor Instr. Cos.
Uehling Instr. Co.
Weston Electcl. Instr.

DRAWING INSTRUMENTS

Airborne Instruments
Alina Corp.
Alpha Instr. Co.
Alteneder & Sons, Theo
ALWAC Corp.
Amer. Hydromath Corp.
Bachmann Co., Eric R.
Berger & Sons
Berger Scient. Supps.
Brown & Sharpe
Bruning Co., Inc.
Brush Eectronics
Cassell Co., John R.
Charvoz-Roos
Dietzgen Co.
Drafto Co.
Gerber Scientific

HUGHES
SEMICONDUCTORS TRANSISTORS • POWER RECTIFIERS • DIODES
First of all, for reliability



RELIABILITY

WHAT IT IS. At Hughes, reliability is the probability that a device will give satisfactory performance during a specific period of time when used in the manner intended. And at Hughes, the probability is high, approaching certainty.

HOW HUGHES ACHIEVES IT. With meticulous consideration to every detail, Hughes has accumulated extensive knowledge of the semiconductor art, extensive knowledge of all the subtle and delicate, yet critical, factors involved. To *really* know is essential. Then, and only then, reliability becomes an automatic result—built into every unit.

HOW HUGHES MAINTAINS IT. Hughes Quality Control is the "watchdog," checking and rechecking every phase of production on a carefully regulated statistical basis. This extensive effort ensures prompt discovery of any variation which might affect the ultimate quality—and the *reliability*.

HOW YOU OBTAIN IT. Specify Hughes, for the greatest possible assurance. For additional information about our products, please write:

SEMICONDUCTOR DIVISION
HUGHES PRODUCTS
International Airport Station, Los Angeles 45, California

HUGHES
SEMICONDUCTORS

Creating a new world with ELECTRONICS

HUGHES PRODUCTS

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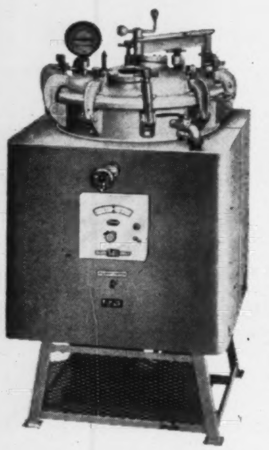

AUTOMATIZE YOUR ENCAPSULATING

RED POINT Encapsulating machines are fully automatic in operation. They produce embedded or potted assemblies under vacuum.

Simple operation and consistent results are features of the RED POINT Encapsulating and Casting Machines. Autoclaves of the units will hold pressures to 110 psi, while the vacuum system pumps down to 100 microns absolute pressure. Swing-away lid with observation window allows the operator to check work in progress.

Temperature range of heated units is ambient to 450° F; casting cup capacity from 194 cc to 2000 cc.
Can be used for single mold, multiple mold or dip-casting.

Write, wire or telephone for further information.

RED POINT CORPORATION

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Trerice Co., H. O.
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Ballantine Labs.
Bristol Co.
Brush Electronics
Chicago Indust. Instr. Co.
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Hycon Electronics
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Minn-Honeywell, Boston
Rawson Elect. Insts.
Rubicon Co.
Sensitive Res. Instr.
Welch Mfg. Co., Wm.
Weston Electcl. Instr.

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Rubicon Co.
Tri-Tronics Co.
Victoreen Instr. Co.
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Gates Electronic Co.
Hellige, Inc.
Industrial Insts., Inc.
Kocour Co.
Kushner Labs.
LaMotte Chem. Prods.
Minneapolis-Honeywell, Boston Div.
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Sargent & Co.
Sherron Metallic Corp.
Taylor & Co., W. A.
Thwing-Albert

ELECTROPNEUMATIC CONVERTERS, see Converters, Electric-to-Pneumatic

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Denver Fire Clay Co.
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Georator Corp.
Henson Co.
Landsverk Electrometer Co.
Nuclear Chicago
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Welch Mfg. Co., W. M.

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Precision Scientific
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Fisher Governor
Flight Res., Inc.
General Controls
GE
Humphrey, Inc.
Jordon Co.
Kahn & Co.
Leslie Co.
Mason-Neilan Div.
Stratos Div.
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Worthington Corp.

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Amer. Instr. Co.
Amer. Mach. & Foundry
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Baldwin-Lima-Hamilton
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Berkeley Div.
Bogue Electric Mfg.
Cambridge Instr. Co.
Chatillon & Sons
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Clough-Brengle
Commercial Res. Div.
Consolidated Avionics
Control Devices Inc.
Control Engrg. Co.
Cook Electric
Crosby Steam Gage
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Eitzen Co., L. C.
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Electric Heat Control
Electric Tachom. Co.
Electro Products Labs.
Electronic Spec. Co.
Engelhard Inc., Chas.
Engineering Res. & Dev.
Engler Instr. Co.
ERDCO Engrg. Corp.
Federal Telephone & Radio
Fox Valley Instr.
Gadgets, Inc.
General Cement Mfg.
General Electronic
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Gilmore Industries
Gow-Mac Instr. Co.
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Hays Corp.
Hickok Electcl. Instr. Co.
I-L-S Instr. Corp.
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Industrial Engrg. Corp.
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Kollsman Instr. Co.
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Land-Air Inc.
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Marion Electcl. Instr.
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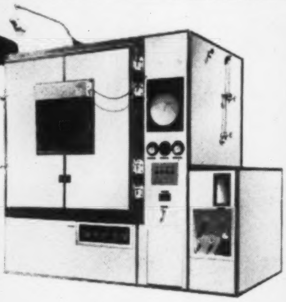
Nuclear Research
Olsen Testing Machine



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Statham Labs.
Streeter-Amet
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Trimount Instr. Co.
Triplett Electcl. Instr.
United Mfg. Co. Div.
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ENGRAVING OF GLASS, see Machines, Engraving

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Amer. Instr. Co.
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Atlas Electric Devices
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Cincinnati Sub-Zero Prods.
Conrad, Inc.
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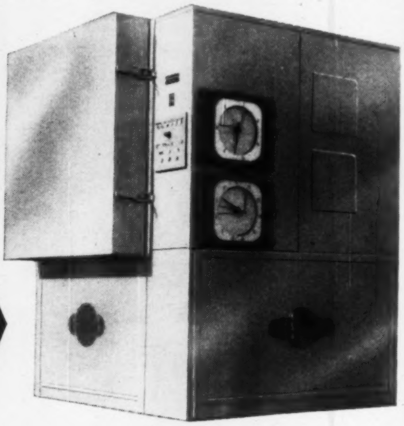

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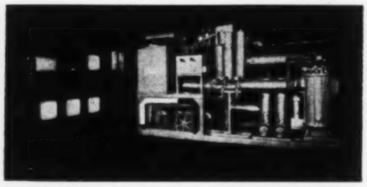

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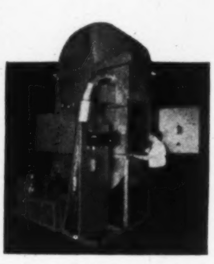

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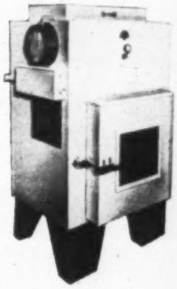

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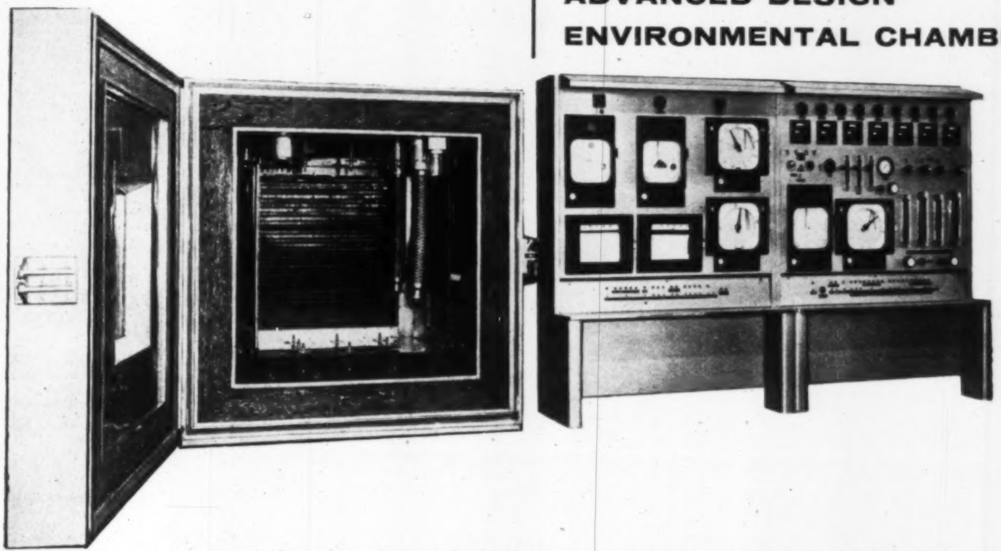

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Lancaster Glass
Nester Co., L. G.
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Palos Optical
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Electro-Chemical Engrg.
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Fischer & Porter Co.
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General Etching & Mfg.
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Gurley, W. & L. E.
Harshaw Chemical
Heise Bourdon Tube
Ideal Industries, Inc.
Kinney Mfg. Div.
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Maymer Corp.
Miller Dial & Name Pl. Co.
Moss & Co., Henry
Newage Industries
New Haven Clock
New Hermes Inc.
Nichols, Lyman
Park Nameplate Co.
Patterson Co., Wayne D.
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Eitzen Co.
Epic Inc.
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Gardner Lab.
GE
Hanovia Chem. & Mfg.
U. S. Testing Co.

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Waterbury Co's
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Joy Mfg.
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Engrg & Res. Corp.
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FIELD RHEOSTATS, see Rheostats, Field

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Ferris Instr. Co.
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FILLING MEDIA for Thermometers

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because atmospheric contamination may affect the accuracy of your instruments.

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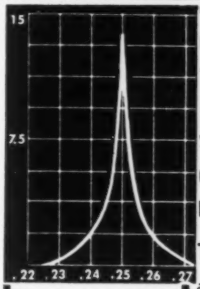

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Varo Mfg. Co., Inc.
White Instr. Labs.

FILTERS, Crystal

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Burnell & Co.
Clegg Labs., Inc.
Communication Access.
Dietz Design & Mfg
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Hycon Eastern
Knights Co., James
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FILTERS, Frequency see also Noise Filters

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General Scientific
Geophysical Instr. Div.
Georator Corp.
Goerz Amer. Optical
Gordon Enterprises
Green Rectifier Co.
Harrison & Harrison
Hayward Scient. Glass
Helio Instr. Co.
Henson Co.
Herron Optical
Internat. Optical
Jaegers, A.
Jan Hardware Mfg.
Jarrell-Ash
Jones Optical
Keim Prec. Mirrors
Klett Mfg.
Kollmorgen Optical
Lab. Optical
Leitz, Inc.
Leroy Clausing Co.
Lynn, Robert M.
Master Optical
Merry Instr. Co.
Metavac, Inc.
Meyer-Opticraft
Mico Instr. Co.
Micramold Insulator
Miller Instruments
Optical Coating Lab.
Optical Engrg. Lab.
Optical Film Engrg. Co.
Pacific Optical
Pacific Univ. Prods. Corp.
Palos Optical
Pan-technics, Ltd.
Pancro Mirrors, Inc.
Perkin-Elmer
Pfaltz & Bauer
Phoenix Prec. Instr.
Photo Crystals, Inc.
Photo Res. Corp.
Photovolt Corp.
Polaroid Corp.
Practo Photo Access.
Precise Measurements Co.
Prec. Glass Prods. Co.
Precision Prods.
Pyrometer Instr. Co.
Regal Instr. Corp.
Republic Lens Co.
Rubicon Co.
Rudolph & Sons
Schneider-Cogswell
Schutte Optical
Servo Corp. of Amer.
Simpson Optical Mfg.
Tinsley Labs.
Triumph Mfg. Co.
Ultra-Violet Prods., Inc.
Unertl Optical
Univis Lens Co.
Wollensak Optical
Zeiss, Inc., Carl
Zenith Optical Lab.

FILTERS, Porous Metal

Accessory Prods. Corp.
Aero Supply Mfg. Co.
Autoclave Engrs.
Consol. Electrodynamics
Gar Prec. Parts, Inc.
High Pressure Equipt. Co.
Hoke, Inc.
Industrol Corp.
International Powder
Kahn & Co.
Kaye & MacDonald
Lennard Co., P. M.
Micro Metallic Corp.
Moraine Products Div.
Norgren Co., C. A.
Pressure Prods. Industries
Schrader's Son, A.
Watts Regulator Co.

FILTERS, Radio Noise, see Filters, Frequency

FILTERS, WATER

A-P Controls Corp.
Accessory Prods. Corp.
Adams Co.
Aero Supply Mfg. Co.
B-I-F Industries
Bendix, Pioneer-Central
Bogue Elect. Mfg.
Crystal Research Labs.
Daigger & Co.
Dollinger Corp.
Enley Products
Ertel Engrg. Corp.
Fisher Scientific
Infilco
Marvel Engrg. Co.
Micro Metallic Corp.
Penfield Mfg. Co.
Permutit Co.
Robbins Aviation
Sel-Rex Corp.
Selas Corp. of Amer.

FILTERS, Wire Cloth

A-P Controls Corp.
Accessory Prods. Corp.
Adams Co., R. P.
Aero Supply Mfg. Co
Air-Maze Corp.
Bishop Co.
Cambridge Wire Cloth
Dollinger Corp.
Marvel Engrg.
Metal Textile Corp.
Micro Metallic Corp.
Multi Metal Wire Cloth
Lennard Co., P. M.
Newark Wire Cloth Co.
Norgren Co.
Pressure Prods. Industries
Republic Mfg. Co.
Research Appliance Co.
Roebling's Sons
Sel-Rex Corp.

FIRE CONTROL INSTRUMENTS, Military and Naval Ordnance

Abrams Instr. Corp.
Aero Electronics
Airborne Instr. Lab
AiResearch Mfg.
Allegany Instr. Co.
All-Tronics, Inc.
Amer. Electronic Mfg.
Amer. Hydromath
Amer. Mach. & Foundry
Amer. Optical
Analogue Controls, Inc.
Arma Div.
Atlas Precision Prod.
Austin Co.
Autonetics Div.
Avion Div.
Bausch & Lomb
Bell & Howell
Bellock Instr. Co.
Bendix Aviation Corp.
Betts & Betts
Bronoptics Co.
Buhl Optical
Bunnell Co.,
Cal-Tronics Corp.
Cedar Engrg. Inc.
Clark Controller
Cook Electric
Cooper Co., Clark
Daco Instrument
Daystrom Instrument
Donner Scientific
Edcliff Instruments
Edna Lite Co.
Edwards Co., Inc.
Elect. Indicator Co.
Electro-Snap Switch
Electronic Associates
Electronic Spec. Co.
Farnsworth Electronics
Farrand Optical
Fecker, Inc.
Ford Instr. Co.
Gaertner Scientific
Garlynn Engrg. Co.
GE, Apparatus Sales
Giannini & Co.
Gilbert & Barker
Goodyear Aircraft
Gordon Enterprises
Gurley, W. & L. E.
H-B Instrument
Helio Instr. Co.
Ideal-Aerosmith
Industrial Control Co.
Inst. Corp. of Fla.
Instr. Devel. Lab.
Jacobs Instr. Co.
Jerpbak-Bayless
Kaiser Aircraft & Elect.
Keystone Products
Kollmorgen Optical
Librascope, Inc.
Magnavox Co.
Magnetic Industries
Martin-Hubbard
Maxson Corp.
Meyer-Opticraft
Mid-Century Instrumatic
Moog Valve
Nalley Co.
Norden-Ketay
North American Insts.
Northrop Anaheim
Opplem Co.
Orban Co., Kurt
Perkin-Elmer
Phila. Scientific Glass
Phoenix Prec. Inst
QOS Corp.
RCA Div.
Ram Meter, Inc.
Ramo-Wooldridge
Reeves Instr. Corp.
Schneider-Cogswell
Servomechanisms, Inc.
Servo Corp. of Amer.
Servonics, Inc.
Servo-Tek Products
Simmonds Aerocessories
Sperry Gyroscope
Staver Co., Inc.
Stavid Engineering, Inc.
Sterling Precision Insts.
Summers Gyroscope
Taller & Cooper
Testa Mfg. Co.
Unertl Optical
U. S. Instr. Corp.
Vectron, Inc.
WacLine, Inc.
Wiancko Engrg. Co.
Wollensak Optical
Zoomar Corp.

FIRE DETECTORS (see also Combustion Safeguards)

Amer. Mach. & Foundry
Arnoux Corp.
Assembly Products
Brit. Electronic Sales
Control Products, Inc.
Cooper Co., Clark
De-Tec-Tronic Corp.
Diatron Co.
Edison, Inc., Thos. A.
Edwards Co., Inc.
Electronic Control
Electronic Spec. Co.
Electronics Corp. of Amer.
Fenwal, Inc.
G-V Controls
Land-Air, Inc.
McNeill Engrg. Co.
Perfex Controls
Rheem Mfg. Co.
Rockwood Sprinkler
Sciaco Controls
Servo Corp. of Amer.
Simmonds Aerocessories
Std. Elect. Time Co.
Tell-Tronics Prods.
Uniform Tubes, Inc.
Worner Electronic Devices

FIREFINDERS, Forest Service

Leupold & Stevens
Zoomar Corp.

FIRING DISCS

Engrg. & Res. Corp.

FITTINGS, Tube and Pipe, Aluminum

Aero Supply Mfg. Co.
Buchanan Elec. Prods.
Century Controls Corp.
Conant Bros. Co.
Conduflex Corp.
Crawford Fitting Co.
Deutsch Co.
Hetherington & Berner
High Pressure Equip.
Imperial Brass
Jordan Reg. Corp.
Natl. Automatic Prods. Co.
Parker Appliance Co.
Scovil Mfg. Co.
Uehling Instr. Co.
Unistrut Prods. Co.
Weatherhead Co.

FITTINGS, Tube and Pipe, Brass and Copper

Aero Supply Mfg. Co.
Aeroquip Corp.
Allmetal Screw Prods.
Bastion-Blessing
Breeze Corp.
Brockway Corp.
Buchanan Elec. Prods.
Century Controls Corp.
Chase Brass & Copper
Conant Bros. Co.
Conduflex Corp.
Crawford Fitting Co.
Deutsch Co.
Diamond Instr Co.
Dole Valve Co.
Flexonics Corp.
Grammes & Sons
Hartford Machine Screw
Hays Mfg. Co.
Hubbell Metals
Imperial Brass
Insuline Corp. of Amer.
Jordan Reg. Corp.
Moore & Co., Samuel
Natl. Automatic Prod.
Parker Appliance Co.
Scovill Mfg. Co.
Seamlex Co.
Steel Co., Herman D.
Swissomatic Products
Uehling Instr. Co.
Unistrut Prods. Co.
Vallorbs Jewel Co.
Weatherhead Co.
Westinghouse Air Brake Co.

FITTINGS, Jacketed

Ampco Mfg. Co.
Conduflux Corp.
Crawford Fitting Co.
Hetherington & Berner
Jerguson Gage & Valve
Littleford Bros.
Parker Appliance Co.
Warren Bros. Mfg.

FITTINGS, High Pressure

Aeroquip Corp.
Amer. Instr. Co.
Autoclave Engrs.
Bastion Blessing
Buchanan Elec. Prods.
Conduflex Corp.
Crawford Fitting Co.
Flexonics Corp.
High Pressure Equipt. Co.
Imperial Brass
Natl. Automatic Prod. Co.
Parker Appliance
Pressure Prods. Industries
Research Appliance Co.
Ruska Instr. Corp.
Special Screw Prods. Co.
Weatherhead Co.

FITTINGS Hard Rubber Plastic & Commercial Plastics

Ampco Mfg. Co.
Conduflex Corp.
Cooper Alloy Foundry
Crawford Fitting Co.
Goodrich Co., B. F.
Imperial Brass Mfg.
LaPine & Co.
Luzerne Rubber
Polymer Corp.
Raybestos-Manhattan
Regal Plastic Co.
Scheidl Mfg. Co.
Stokes Molded Prods.
Tube Turns Plastics
U. S. Rubber Co.
Vallorbs Jewel Co.
Vanton Pump & Equipt.

FITTINGS, Quick-Disconnect

Ace Glass Inc.
Aeroquip Corp.
Coaxial Connector Co.
Conduflex Corp.
Crawford Fitting Co.
Hansen Mfg. Co.
Hydromatics Inc.
Jordan Reg. Corp.
Kahn & Co.
Potter Aeronaut. Corp.
Schrader's Son, A.
Simmonds Aerocessories
Snap-Tite, Inc.
Tech. Material Corp.
Vanton Pump & Equipt.
Weatherhead Co.

FITTINGS, Stainless Steel

Aeroquip Corp.
Aero Supply Mfg.
Autoclave Engrs.
Century Controls Corp.
Conant Bros. Co.
Conduflex Corp.
Crawford Fitting Co.
Deutsch Co
Dragon Engrg. Co.
Flexonics Corp
Hetherington & Berner
High Pressure Equipt. Co.
Imperial Brass
Jordan Reg. Corp.
Littleford Bros.
Natl. Automatic Prods. Co.
Parker Appliance Co.
Pressure Prods. Industries
R-P & C Valve Div.
Research Appliance Co.
Robbins & Assocs.
Ruska Instr. Corp.
Snap-Tite, Inc.
Special Screw Prods. Co.
Star Stainless Screw Co.
Uehling Instr. Co.
Unistrut Prods. Co.
Vanton Pump & Equipt.
Weatherhead Co.

FITTINGS, Tube and Pipe, Steel

Aeroquip Corp.
Aero Supply Mfg. Co.
Alden Products
Allegheny Ludlum
Autoclave Engineers
Buchanan Elec. Prods.
Century Controls Corp.
Conant Bros.
Conax Corp.
Conduflex Corp.
Crawford Fitting Co.
Deutsch Co
Flexonics Corp.
Hetherington & Berner
High Pressure Equipt. Co.
Imperial Brass
Littleford Bros.
Natl. Automatic Prods. Co.
Parker Appliance Co.
Robbins Aviation Co.
Scovill Mfg. Co.
Special Screw Products
Uehling Instr. Co.
Unistrut Prods. Co.
Weatherhead Co.

FLAME FAILURE SAFEGUARDS, see Combustion Safeguards

FLANGES, Orifice, see Orifice Flanges

FLANGES, Pipe

Ace Glass Inc.
American Meter Co.
Commercial Plastics
Conant Bros. Co.
Jordan Corp.
Vanton Pump & Equip.

FLASH POINT TESTERS, Including Cleveland Open Cup, Elliott Closed Cup, Pensky-Martens, and Tage Closed

Amer. Instr. Co.
Apex Scient.
Boekel & Co.
Central Scientific
DuBois Engrg. & Mfg
Eitzen Co., L. C.
Fisher Scientific
Greiner, Emil
Humboldt Mfg. Co.
Koehler Instr. Co.
Labline, Inc.
Olsen Testing Machine
Precision Scientific
Ruttco Mfg. Co.
Soiltest, Inc.
Weston Electcl. Instr

FLASHERS

AEMCO, Inc.
Amglo Corp.
Chatham Electronics
Davis Insts. Div.
Dormitzer Elec. & Mfg
Electronic Spec. Co.
E-T-A Products
Fecker, Inc., J. W.
Fruengel, Inc.
Gordon Enterprises
Haydon Mfg. Co.
Kemlite Labs.
Kirkland Co.
Kulka Electric Mfg
Pacific Transducers
Reynolds Electric
Thordarson-Meissner
Tigerman Engrg. Co.
United Control Corp.
Wallace & Tiernan
Zenith Electric

FLATNESS TESTERS (see also Optical Flats)

Acme Scientific
Baird-Atomic
Bausch & Lomb
Bronoptics Co.
Buhl Optical
Crystal Research Labs
Davidson Mfg.
E & S Optical
Engis Equipt. Co.
Fecker, Inc.
Fish-Schurman
Fruengel, Inc.
Gaertner Scientific
Georator Enterprises
Gordon Enterprises
Lab. Optical
Micrometrical Mfg. Co
Opplem Co.
Opto-Metric Tools
Optron Laboratory
Palos Optical
Pan-Technics, Inc.
Phoenix Prec. Instr.
Scherr Co., Inc.
Sheffield Corp.
Sherron Metallic Corp.
Van Keuren Co.,
Zeiss, Inc., Carl
Zenith Optical Lab.

FLATS, Optical, see Optical Flats

FLAW DETECTORS, Chemical

Magnaflux Corp.
Sunshine Scientific

FLAW DETECTORS, Magnetic

Aero Electronics
Annis Co.
Commercial Res. Div.
Detectronic Corp.
Dice Co.,
Eder Instr. Co.
Fraser Devel. Lab.
GE
Magnaflux Corp.
Magnetic Analysis Corp.
Miller Instruments
Rowe Engrg. Co.
Rubicon Co.
Sensitive Res. Instr.
Sunshine Scientific
Western Indust. Engrg

FLAW DETECTORS, Miscellaneous, including Resistance and/or Conductivity, also Holiday and Pin Hole Detectors

Branson Insts. Inc.
Crown Indust. Prods. Co.
Davenport Mfg.
Devtronics, Inc.
Dice Co., J. W.
Electronic Control
Ess Instr. Co.
GE, Apparatus Sales
Gardner Lab.
Hillyer Instr. Co.
Industrial Electronics
Indust. Electronics (Mass.)
Magnaflux Corp.
Magnetic Analysis Corp.
Menlo Research Lab.
Peschel Electronics
Sunshine Scientific
Teletronics Lab., Inc
U. S. Radium Corp.
Veeco Vacuum Corp.
Viking Instr. Co.

FLAW DETECTORS, Radiography, including Beta-ray and X-ray (see also X-ray)

Amer. Tradair Corp.
Bar-Ray Prods.
Can. Rad. & Uran.
Diamond Power Spec. Corp.
GE X-ray Dept.
Menlo Research Lab.
North Amer. Philips
Nuclear Corp. of Amer.
Nuclear Research Corp.
Std. Electronic Res.
U. S. Radium Corp.
Western Radiation Lab.

FLAW DETECTORS, Ultrasonic

Branson Instruments
Dice Co., J. W.
DuMont Labs., Inc.,
  Allen
Ercona Corp.
Gulton Industries
Magnaflux Corp.
Sperry Products
Sunshine Scientific

FLAW DETECTOR CARS, for Rail Track Testing

Baldwin-Lima-Hamilton
Branson Instruments
Eitzen Co., L. C.
Farnsworth Electronics
Hacker & Co.
Olsen Testing Machine
Sperry Products

FLEXIBLE COUPLINGS, Fractional H. P.

Breeze Corp.
Clifford Mfg. Co.
Continental Diamond Fibre
Cook Electric
Electric Tachom. Corp.
Esterline-Angus
Falcon Machine & Tool
Goodrich Co., B. F.
Jan Hardware Mfg. Co
Johnson Co., E. F.
L. & R. Mfg. Co.
Lord Mfg. Co.
Merkle Korff
Millen Mfg. Co.
Phila. Gear Works
Reeves Instr. Corp.
Reflectone Corp.
Renbrandt, Inc.
Seamlex Co., Inc.
Servomechanisms, Inc.
Stewart Corp.
Stow Mfg.
Teleflex, Inc.
Vallorbs Jewel Co.
Werner Co.,
White Indust. Div., S. S.

FLIGHT TABLES, see Simulators

FLIGHT TEST INSTRUMENTS

Aero Electronics
Aero Res. Instr. Co.
Airborne Instruments
Analogue Controls, Inc.
Applied Science Corp.
Arnoux Corp.
Autonetics Div.
Avion Div.
B & F Instrs.
Barton Instr. Co.
Bendix, Computer Div.
Bendix, Pioneer-Central
Boonton Radio
Brooks Rotameter
Brush Electronics
Burton Mfg.
Calif. Tech. Indust.
Cal-Tronics Corp.
Carroll Co., J. B.
Century Electronics & Instr.
Colvin Labs., Inc.
Commercial Research
Consol. Electrodynamics
Consolidated Avionics
Datran Electronics
Davies Labs.
Donner Scientific
El Mec Laboratory
Electro Insts., Inc.
Electronic Assocs.
Engrg. & Res. Corp.
Epsco, Inc.
Farnsworth Electronics
Federal Telephone & Radio
Flight Res., Inc.
Ford Instr. Co.
General Devices Inc.
GE
General Mills Inc.
Genisco Inc.
Giannini & Co.
Goodyear Aircraft
Gordon Enterprises
Gray Instr. Co.
Hamilton Watch
Hastings-Raydist
Hathaway Instr. Co.
Heiland Div.
Impact Register Co.
Industrial Control Co.
Instr. Associates
Intercontinental Dynamics
Kahn & Co.
Kaiser Aircraft & Elect.
Kollsman Instr. Co.
Lessells & Assocs.
Lewis Engrg. Co.
M. B. Mfg. Co.
Marion Electcl. Instr.
Matiss Equipt. Co.
Meriam Instr. Co.
Minneapolis-Honeywell,
  Boston Div.
  Indus. Div.

Swagelok®
TUBE FITTINGS

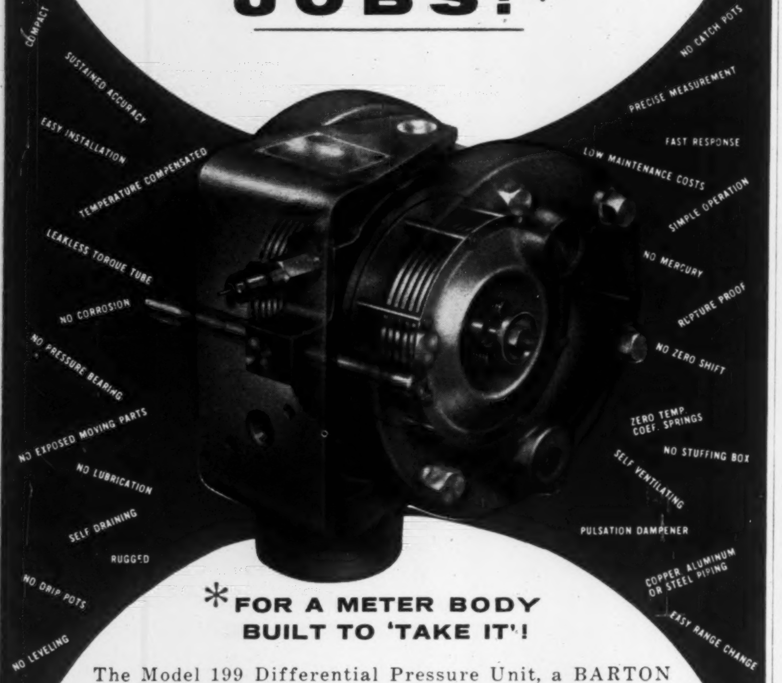
first in engineered precision

- Swagelok tube fittings provide an easily-installed, torque-free, leak-proof seal. There is a Swagelok Specialist in your area. Write Dept. R-7.

CRAWFORD FITTING COMPANY
884 East 140th Street • Cleveland 10, Ohio

For more information circle **124** on inquiry card.

WANTED: TOUGH JOBS!*



***FOR A METER BODY BUILT TO 'TAKE IT'!**

The Model 199 Differential Pressure Unit, a BARTON development, was designed to answer industry's needs for a compact, yet rugged device for accurately sensing differential pressure. It has found extensive use in the many fields of Instrumentation and Automation for the precise measurement of FLOW, Liquid Level and Differential Pressure. The unit incorporates the patented BARTON RUPTURE-PROOF BELLOWS principle, internal motion pickup and torque tube transmission to the exterior of the housing. The Model 199 Differential Pressure Units are available with differential pressure ranges from 0-20″ W.C. to 0-50 PSI with safe working pressures to 6,000 PSIG. All BARTON bellows units are hydraulically tested and overranged to 1.5 times the safe working pressure, regardless of the differential range.

For further information, contact Barton Sales Representatives in principal cities.

model 200 INDICATOR

Bull. 11C4

model 202 RECORDER

Bull. 11C4

model 211 FLOW SWITCH

Bull. 211-1

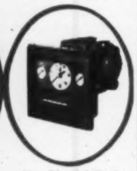
model 214 TRANSMITTER

Bull. 214-1

model 236 INTEGRATOR

Bull. 236-1

model 237 CONTROLLER



Bull. 237-1

199-357

BARTON INSTRUMENT CORPORATION

580 MONTEREY PASS ROAD, MONTEREY PARK, CALIFORNIA

For more information circle **125** on inquiry card.

Natl. Aircraft Corp.
Norden-Ketay Corp.
North Amer. Instruments
Pacific Scientific
Parsons Co., Ralph M.
Penn Insts. Div.
Potter Aeronautical Co.
Rahm Insts. Inc.
Revere Corp.
Robertshaw-Fulton
Rubicon Co.
Scientific Enterprises
Sensitive Res. Instr.
Sperry Gyroscope
Statham Labs.
Stavid Engineering, Inc.
Summer Gyroscope Co.
Televiso Corp.
Thwing-Albert
Topp Industries, Inc.
Traid Corp.
U. S. Gauge Div.
United Electrodynamics
WacLine, Inc.
Wallace & Tiernan
Waugh Engrg. Co.
Wianko Engrg. Co.
Wollensak Optical
Zoomar Corp.

FLOATS, Miscellaneous (see also Level)

Aero Supply Mfg. Co.
Amer. Hard Rubber Co.
Armstrong Cork
Automatic Control Co.
Bristol Co.
Cooper Co., Clark
Keckley Co.
Luzerne Rubber Co.
Naugatuck Mfg. Co.
Nicholson & Co., W. H.
Parker Appliance Co.
Schnitzer Alloy Prods.
Shand & Jurs
Sponge Rubber Prods.
Stokes Molded Prods.
Taylor Mfg. Co.
U. S. Rubber
Weber Bros. Metal Wks.

FLOW, Flowmeters

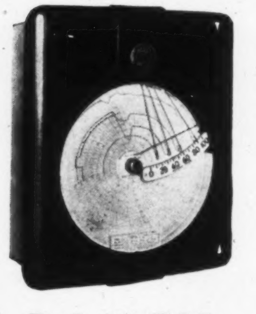
Indicate RATE of flow. For positive or "quantity" fluid meters, see Flow Measuring Devices, Volometric Displacement

FLOW CALIBRATING DEVICES, including weighing-displacement types

Ace Glass
Badger Meter Co.
Barnstead Still
Bendix, Pioneer-Central
Brooks Rotameter Co.
Computer-Measmts. Corp.
Daystrom Instrument
Exact Weight Scale
Fischer & Porter Co.
Hopp Press, Inc.
Hupp Instrumentation
Inertial Instrs.
Leupold & Stevens
Nankervis Co.
National Inst. Labs.
Neptune Meter Co.
Nuclear Research Corp.
Oil Metering & Processing
Parametres, Inc.
Performance Measmts.
Potter Aeronaut. Corp.
Thayer Scale & Engrg
Toledo Scale Co.

FLOW CONTROLLERS

Accessory Prods. Corp.
Aero Supply Mfg. Co.
AiResearch Mfg. Co.
Amer. Meter Co.
Arnoux Corp.
Askania Reg. Co.
Askania Werke, A. G.
Assembly Products
Autom. Switch Co.
Automation Prods. Inc.
B-I-F Industries
Bailey Meter Co.
Barton Instr.
Bogue Elect. Mfg.
Bristol Co.
Brooks Rotameter
Builders-Providence
Cal-Tronics Corp.
Cash Valve Mfg. Corp.
Century Controls Corp.
Conoflow Corp.
Controls Co. of Amer.
Cooper Co., Clark
Cutler-Hammer
Fischer & Porter Co.
Foster Engrg. Co.
Foxboro Co.
Fulton Sylphon Div
Gar Prec. Parts, Inc.
GE, Apparatus Sales
Genl. Reg. Corp.
Gordon Co.
Greiner Co., Emil
Hagan Chem. & Controls
Hallikainen Instruments
Hays Corp.
Hays Mfg. Co.
Hydraulic Res. & Mfg. Co.
Industrial Control Panel
Industrial Electronics
Indust. Instr. Corp.
Infilco
Johnson Service Co.
Jordan Co.
Jordan Reg. Corp.
Kates Co. W. A.
Leonard Inc., Wallace O.
Leslie Co.



BAILEY *Fluid Meters*

FOR STEAM-LIQUIDS-GASES

- Bailey Fluid Meters are designed to indicate, record, and/or integrate the flow of steam, liquids, or gases under practically any pressure or temperature conditions.

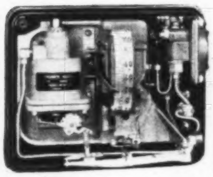
One to four records may be made on a single 12 in. circular chart or two records of flow may be combined in the same case with two integrators or two pneumatic controllers.

Either pneumatic or electric transmission may be used when it is desired to place the Receiver Recorder at a distance from the primary element.

Request Bulletin G15-1.

BAILEY METER COMPANY
1041 IVANHOE ROAD · CLEVELAND, O.
Bailey Meter Company Ltd., Montreal, Canada

For more information circle **126** on inquiry card.



BAILEY SQUARE ROOT CONVERTER

- Extracts the square root of nonlinear pneumatic signals from flow differential pressure transmitters. The converter then transmits a pneumatic signal directly proportional to rate of flow to indicating, recording, integrating, and/or control equipment.

By extracting the square root function, the Bailey Square Root Converter gives full control rangeability to differential pressure transmitters.

Request Product Specification P22-5.

BAILEY METER COMPANY
1041 IVANHOE ROAD · CLEVELAND, O.
Bailey Meter Company Ltd., Montreal, Canada

For more information circle **127** on inquiry card.

Liquidvision Gauge & Con
Magnetrol, Inc.
Manning, Maxwell & Moore
Manostat Corp.
Mason-Neilan Div.
McDonnell & Miller
Minneapolis-Honeywell
Moore Products
Nuclear Research Corp.
Penn Insts. Div.
Phoenix Prec. Instr.
Photobell Co.
Potter Aeronautical Co.
Power Engrg. & Equipt.
Powers Reg. Co.
Proportioneers, Inc.
Ramapo Instr. Co.
Reliance Instr. Mfg. Corp.
Republic Mfg. Co.
Research Control Instr. Co.
Rivett Lathe & Grinder
Rockwell Co., W. S.
Roy Co., Milton
Servo-Tek Products
Shallcross Controls
Simplex Valve & Meter Co.
Sparling Meter Co.
Squires Co., C. E.
Stratos Div.
Swartwout Co.
Systron Corp.
Taller & Cooper, Inc.
Taylor Instr. Cos.
Waterman Engrg Co.
Waukee Engrg Co.
Weston Electcl. Instr.

FLOW INSTRUMENTS, Granular Materials

Askania Reg. Co.
B-I-F Industries
Bailey Meter Co.
Baldwin-Lima-Hamilton
Bin-Dicator Co.
Builders-Providence
Control Engrg. Co.
Dietert Co.
Fielden Instr. Div.
GE, X-Ray Corp.
Gilmore Industries
Hadley Assoc.
Industrial Process Engr.
Instruments Inc.
Jarco Services
Jeffrey Mfg. Co.
Merrick Scale Co.
Nuclear Research Corp.
Ohmart Corp.
Omega Machine
Power Engrg. & Equipt.
Proportioneers, Inc.
R. K. L. Valve & Mfg.
Richardson Scale
Robertshaw-Fulton
Thayer Scale & Engrg.
Toledo Scale Co.
Wallace & Tiernan

FLOW NOZZLES

Airflo Instr. Co.
AiResearch Mfg.
Askania Reg. Co.
B-I-F Industries
Bacharach Indust. Instr.
Bailey Meter Co.
Bristol Co.
Builders-Providence
Engineered Prods.
Foxboro Co.
Gar Prec. Parts, Inc.
Hagan Chem & Controls
Hays Corp.
Jessup Engrg. & Devel. Co.
Jordan Reg. Corp.
Keller, Jr., Hugo P.
Keller & Co.
King Engrg.
Minneapolis-Honeywell
OPW Corp.
Penberthy Injector Co.
Penn Insts. Div.
Phoenix Prec. Instr.
Republic Flow Meters
Simplex Valve & Meter Co.
Taylor Instr. Cos.
Willey's Carbide Tool Co.
Worley Jewel Co.

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Electro Products Labs.
Fischer & Porter Co.
Nankervis Co.
Potter Aeronautical Co.
Propulsion Devel. Lab.
Waugh Engrg. Co.

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Indust. Instr. Corp.
Oil Metering & Processing
Power Engrg. & Equipt.
Precision Scientific
Superior Meter Co.

FLOW REGULATORS, Self Operated

Accessory Prods. Corp.
Aero Supply Mfg. Co.
Amer. Meter Co.
Askania Reg. Co.
Askania-Werke, A. G.
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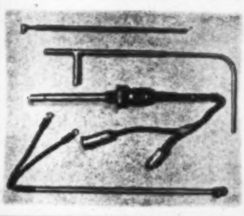

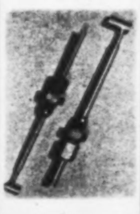

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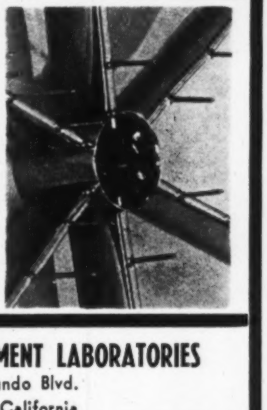
Your test conditions and date requirements guide our specifications.



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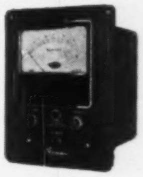

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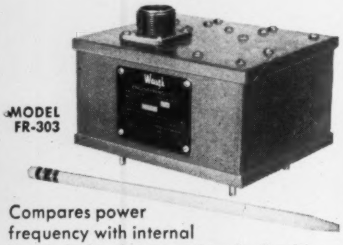

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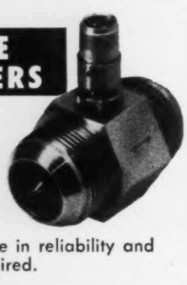

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Leupold & Stevens
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Penn Insts. Div.
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Potter Instr. Co.
Ramapo Instr. Co.
Ransom Research
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Revere Corp.
Simplex Valve & Meter Co.
Smith Meter
Southw. Indust. Electronics
Sparling Meter Co., Inc.
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Streeter-Amet
Systron Corp.
Taller & Cooper, Inc.
Taylor Instr. Cos.
Thayer Scale & Engrg.
Wallace & Tiernan
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Bristol Co.
Brooks Rotameter
Fischer & Porter Co.
Foxboro Co.
GE Apparatus Sales
Hagan Chem. & Controls
Hays Corp.
Indust. Instr. Corp.
Inertial Instruments, Inc.
Leupold & Stevens
Manning, Maxwell & Moore
Mason-Neilan Div.
Minneapolis-Honeywell
Moore Products
Nankervis Co.
Norden-Ketay Corp.
Penn Insts. Div.
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Revere Corp. of Amer.
Shand & Jurs Co.
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Sparling Meter Co., Inc.
Sparton Cont. Systems
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Bendix-Friez
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Fish-Schurman
Gems Co.
Greiner Co., Emil
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Hallikainen Instruments
Hammel-Dahl
Hays Corp.
Hoke Inc.
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Jacoby-Tarbox
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Mercury Glass Co.
Minneapolis-Honeywell
Nankervis Co.
National Meter Co.
New Jersey Meter Co.
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Oil Metering & Processing
Penn Insts. Div.
Phoenix Prec. Instr.
Podbielniak, Inc.
Prec. Glass Prods.
Precision Scientific
Schrader's Son, A.
Schutte & Koerting
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Slaughter Co.
Sticht Co., Herman M.
Taylor Instr. Cos.
Thermco Labs.
Waukee Engrg. Co.

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Barton Instr. Co.
Bristol Co.
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Fischer & Porter
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Precision Scientific
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Rockwell Register Corp.
Simplex Valve & Meter
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Foxboro Co.
Gems Co.
Hydraulic Controls Co.
Instr. Associates
Intercontinental Dynamics
Maxson Instr. Div.
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Potter Aeronautical Co.
Revere Corp.
Sangamo Electric
Sparton Cont. Systems
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Waugh Engrg. Co.

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Aero Research
AiResearch Mfg.
Airflo Instr. Co.
Amer. Meter Co.
Askania Reg. Co.
Askania-Werke, A. G.
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B-I-F Industries
Bacharach Indust. Instr.
Bailey Meter Co.
Barton Instr. Corp.
Bendix, Eclipse-Pioneer
Bendix-Friez
Bethlehem Apparatus
Bristol Co.
Brooks Rotameter
Builders-Providence
Cambridge Instr. Co.
Campbell Co.
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Commercial Iron Works
Corning Glass Works
Crescent Engrg. & Res.
Custom Scientific
Daniel Orifice Fitting
Dwyer Mfg. Co.
Dynamic Instr. Co.
Elematic Equipt. Corp.
Ellison Draft Gage
Fischer & Porter Co.
Flow Corp.
Foster Engrg. Co.
Foxboro Co.
Gems Co.
Green Rectifier Co.
Greiner Co., Emil
Greiner Glassblowing Lab.
Griebel Co.
Hagan Chem. & Controls
Hastings—Raydist
Hays Corp.
Hill & Co.
Hoke, Inc.
Hydraulic Controls Co.
Ideal-Aerosmith
Illinois Testing Labs.
Industrial Instr. Corp.
International Filter
King Engrg.
Kollsman Instr. Div.
Leeds & Northrup
Leupold & Stevens
Liquidepth Indicators
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Mason-Neilan Div.
Maxson Corp., W. L.
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Meriam Instr. Co.
Minneapolis-Honeywell
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Oil Metering & Processing
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Phoenix Prec. Instr.
Pitometer Log Corp.
Precision Scientific
Prec. Thermom. & Insts.
Precision Tube Co.
Ramapo Instr. Co.
Refinery Supply Co.
Republic Flow Meters
Revere Corp.
Robinson Orifice
Rockwell Mfg. Co.
Schutte & Koerting
Scientific Glass App.
Scientific Instr. Co.
Shand & Jurs Co.
Simplex Valve & Meter Co.
Southw. Indust. Electron.
Superior Meter
Task Corp.
Taylor Instr. Cos.
Trimount Instr. Co.
Turner Electric
Uehling Instr. Co.
U. S.. Gauge Div.
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Wiancko Engrg.

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Fielden Instr. Div.
Fischer & Porter Co.
Foxboro Co.
Gurley, W. & L. E.
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Hays Corp.
Industrial Instr. Corp.
Jordan Reg. Corp.
Leupold & Stevens
Mason-Neilan Div.
Minneapolis-Honeywell
Penn Insts. Div.
Republic Flow Meters
Scientific Instr. Co. Calif.
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Sparling Meter
Swartwout Co.
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FLOWMETERS, Open-Stream, see Flowmeters, Open Channel

FLOW Measuring Devices, Volumetric displacement Including Consumer Gas Nutating Pistons or Disc, Oscillating Piston, Propeller, Reciprocating Piston and Rotary Piston, Water Meters, etc.

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Bristol Co.
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Engineering Res. & Devel.
Fischer & Porter Co.
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Gems Co.
Gilmore Industries
Gurley, W. & L. E.
Hagan Chem. & Controls
Hays Corp.
Henszey Co.
Hetherington & Berner
Hoke, Inc.
Industrial Instr.
Jarco Services
Labline, Inc.
Lapp Insulator
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Single nutating piston volumetric displacement metering, with integrating registers, or explosion-proof Electricontact construction. Indicating, recording and controlling attachments also available.

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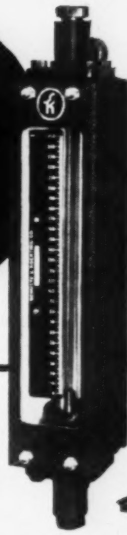
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Rotary Flow Indicator

SK makes a complete line of Rotameters and Flow Indicators. For quick delivery the company stocks popular types and sizes. If you need action fast, contact us stating your requirements. We'll let you know if a stock item is available and, if not, what we can do to expedite delivery. If you want an idea of types available, write for Bulletin 18RA. It pictures and describes our line.

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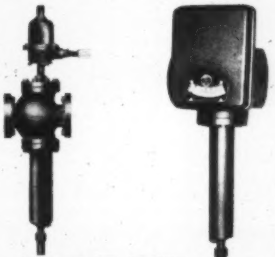

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Transmits a signal which is directly proportional to rate of flow to indicating, recording, integrating, and/or controlling equipment at remote stations.

For rate of flow measurement of water, kerosene, gasoline, oil, tar, chemicals, distillates, and refrigerants. Measures rate of flow over a 50 to 1 range. Mounts directly in pipe line.

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Shand & Jurs Co.
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Smith Meter Co.
Sparling Meter Co.
Sprague Meter Co.
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GE
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Shand & Jurs
Selas Corp.
Trimount Instr.
Trinity Equipt. Co.
Triplett Electcl. Instr.
Uehling Instr. Co.
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Bendix, Pioneer-Central
Crescent Engrg. & Res.
Elematic Equipt. Corp.
Fischer & Porter
Hays Corp.
Henszey Co.
Illinois Testing Labs.
Industrial Instr. Corp.
Jordan Reg. Corp.
Mason-Neilan Div.
Penn Insts. Div.
Potter Aeronautical Co.
Power Engrg. & Equipt.
Revere Corp.
Scully-Jones
Simplex Valve & Meter
Sparling Meter Co.
Sperry-Son Well Surveying
Standard Controls, Inc.
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FLUE GAS ANALYZERS, see Gas Analyzers, also Combustion

FLUID METERS, GAS, see Flowmeters, Positive Displacement

FLUID METERS, Liquid, see Flowmeters, Positive Displacement

FLUID METERS, Quantity, see Flowmeters, Positive Displacement

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Basic Controls, Inc.
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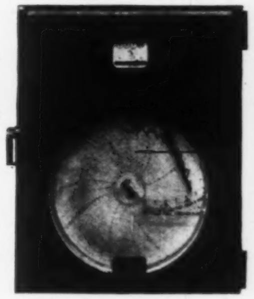

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Normal Frequencies:
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Special Ranges:
from 15-1500 cycles

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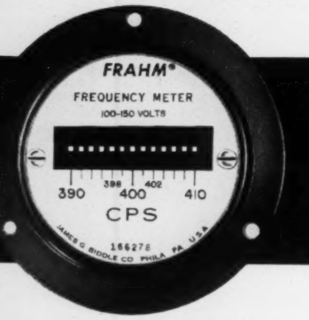

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METERS

....in Switchboard, Miniature and Portable types
....indicate alternating current frequency from 15 up to 1500 cycles per second
....applicable to pulsating or interrupted D-C as well as A-C supply circuits

Frahm Resonant Reed Miniature Sealed Type Frequency Meters are hermetically sealed to withstand excessive humidity, dust, fungus attack, moisture (as aboard ship) and other destructive atmospheric conditions. Available in 2½" and 3½" sizes.

Frahm Frequency Meters can be specially designed to your specifications for range, methods of activating, scale graduations, etc. We invite your correspondence.

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B-523

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Phoenix Prec. Instr.
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DuPont
Laboratory Specialties
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Nuclear Corp. of Amer.
Precise Measmts. Co.
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FLUORESCENT MERCURY VAPOR TUBES, see Light Sources

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Farrand Optical
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Fansteel Metallurgical
Federated Metals Div.
Fusion Engrg. Co.
GE
Grayhill
Handy & Harman
Harshaw Chemical
Hi-Grade Alloy Corp.
Hubbell Metals, Inc.
Imperial Brass Mfg. Co.
Johnson Gas Appliance
Kester Solder Co.
Krembs & Co.
Linde Co.
Mallory & Co., P. R.
Marshall Co.
Mico Instr. Co.
National Cylinder Gas
Ney Co.
Ohio Carbon Co.
Sherman & Co.
Superior Flux Mfg. Co.
Technical Soldering Co.
Wall Colmonoy Co.
Westinghouse Electric

FLUXMETERS, see Magnetic Field Strength Indicators

FOIL, Precious Metals (see also Ribbon)

Alpha Metals
Amer. Platinum Wks.
Amer. Silver Co.
Baker & Co.
Bishop & Co., J.
Cohn Corp., Sigmund
Fansteel Metallurgical
General Plate Div.
Hamilton Watch
Handy & Harman
Ney Co.
Paul & Stein Bros.
Reynolds Metals Co.
Secon Metals Corp.
Sherman & Co.
Staver Co., Inc.

FOLDING ENDURANCE TESTERS, Paper, see Paper Test

FOOT CANDLE INDICATORS, see Illumination Instruments

FORCE MEASURING EQUIPMENT (see also Torque)

Aero Electronics
Allegany Instr. Co.
Asch Equipt. Co.
Askania Reg. Co.
Askania-Werke, A. G.
Atlantic Research
Autom. Timing & Controls
Avion Div.
B & F Instr.
Baldwin-Lima-Hamilton
Bristol Co.
Brush Electronics
Bush Assocs.
Century Geophysical
Chatillon & Sons
Cleveland Fuel Equip.
Clevite-Brush
Consol. Electrodynamics
Crescent Engrg. & Res. Co.
Daytronic Corp.
Dillon & Co.
Donner Scientific
Emery Co.
Endevco Corp.
Engineering Res. & Devel.
Exline Engrg. Co.
Fairbanks, Morse & Co.
Ferner Co., R. Y.
GE, Apparatus Sales
Genisco, Inc.
Gilmore Industries
Gulton Industries
Hagan Chem. & Controls
Hunter Spring Co.
Indikon Co.
Industrial Electronics
Industrial Engrg. Corp.
Kistler Instr. Corp.
Lessells & Assocs.
Link Engrg. Co.
Martin-Decker Corp.
Morehouse Machine
North Amer. Insts.
Pacific Scientific
Polyphase Instr.
Radiation, Inc.
Republic Flow Meters
Rockwell Engrg. Co.
Schaevitz Engineering
Statham Labs.
Steel City Testing Machs.
Stewart Instr. Co.
Task Corp.
Taylor Instr. Cos.
Testing Machines, Inc.
Webster Instr. Inc.
Wiancko Engrg. Co.

FOREWARN DETECTORS, for Locating Hidden Weapons, see Metal Detectors

FORGINGS, Small, Precision

Aluminum Co. of Amer.
Chase Brass & Copper
Gorton Mach. Co.
Haynes Stellite
Jessop Steel
Keystone Carbon Co.
Mallory & Co., P. R.
Reynolds Metals Co.
Scovill Mfg. Co.
Stafford Co.
Titan Metal Mfg. Co.

FORKS, Synchronization

Amer. Time Prods.
Elect. Tachometer Corp.
Gaertner Scientific
Leeds & Northrup
MacLeod & Hanopol
McShan Devel. Co.
Philamon Labs.
Riverbank Labs.
Times Facsimile Corp.
Welch Mfg. Co., W. M.

FORKS, Tuning, Including Electrically Driven

Allied Products Div.
Amer. Instr. Co.
Amer. Time Prods.
Bunnell Co.
Cambridge Instr. Co.
Central Scientific
Century Geophysical
Chatillon & Sons
Chicago Apparatus Co.
Electronic Prods. Co.
Elect. Tachom. Corp.
Engineering Labs., Inc.
Fecker, Inc.
Gaertner Scientific
GE
General Radio
Hathaway Instr. Co.
Heiland Div.
Hormell Instr. Co.
Industrial Test Equipt.
Leeds & Northrup
McShan Devel. Corp.
Metron Instr. Co.
Muirhead Instrument
Narda Corp.
Philamon Labs.
Phipps & Bird
Riverbank Labs.
Sherron Metallic Corp.
Standard Elect. Time
Stoelting Co.
Times Facsimile Corp.
Varo Mfg. Co.
Welch Mfg. Co., W. M.

FORKS, Vacuum Driven

Cambridge Instr. Co.
Gaertner Scientific
General Radio
Industrial Test Equipt.
McShan Devel. Corp.
Muirhead Instrument
Philamon Labs.
Riverbank Labs.
Times Facsimile Corp.

FRACTIONAL HORSEPOWER MOTORS, see Motors, Fractional Horsepower

FRACTIONATING COLUMNS, see Distillation

FREENESS TESTERS

Bristol Co.
Dietert Co.
Testing Machines, Inc.
Williams Apparatus Co.

FREQUENCY ANALYZERS, see Spectrum

FREQUENCY CHANGERS

American Electronics
Amer. Mach. & Foundry
Bekey Electric
Boonton Radio
Consolidated Avionics
Davenport Mfg.
Eastern Air Devices
Eicor, Inc.
Electronic Spec. Co.
GE, Apparatus Sales
I-L-S Instr. Corp.
Indust. Test Equipt. Co.
Kato Engrg.
Lampkin Labs., Inc.
National Co.
Perkin Engrg. Co.
Philamon Labs.
Radio City Products
Sorensen & Co.
Tel-Instr. Elects. Corp.
Varo Mfg. Co.
WacLine, Inc.
Walker Div.
Westinghouse Electric

FREQUENCY CONTROLLERS

A-V Mfg. Corp.
Amer. Mach. & Foundry
Berkeley Div.
Browning Labs., Inc.
Consolidated Avionics
Electronic Spec. Co.
Feiler Engrg.
GE
Hallikainen Insts.
Hormell Instr. Co.
Hupp Instrumentation
I-L-S Instrument
Kellogg Switchboard
Leeds & Northrup
Magnetic Instr. Co.
Magnetic Res. Corp.
Maxson Instr. Div.
Minnesota Electronics
National Co.
Photometer Log Corp.
Potter Aeronautical Co.
Potter Instr. Co.
Radio City Products
Servo Corp. of Amer.
Std. Electronic Res.
Stewart Instr. Co.
Systron Corp.
Thompson Products
Varo Mfg. Co.
WacLine, Inc.
Waugh Engrg. Co.

FREQUENCY INDICATOR STANDARDS, see Standards, Frequency

FREQUENCY INDICATORS and/or RECORDERS, Electronic

Advance Electronics
Aero Instr. Co.
Air-O-Tronics
Aircraft Armaments
Alden Electron & Impulse
American Electroneering
Amer. Mach. & Foundry
Avion Div.
B & H Instr. Co.
Berkeley Div.
Berkshire Labs.
Biddle Co., James G.
Bristol Co.
Browning Labs.
Brush Electronics
Burlington Instr. Co.
Clarke Instr. Corp.
Computer Co. of Amer.
Computer-Measmts. Corp.
Conn. Ltd.
Consolidated Avionics
Daven Co.
Davenport Mfg. Co.
DeJur Amsco
Detectron Co.
Diatron Co.
Donner Scientific
Dynapar Corp.
Electrical & Physical Instr.
Electro-Pulse, Inc.
Electro-Tech Equipt. Co.
Electronic Devel. Co.
Electronic Spec. Co.
Electronic Tube Co.
El Mec Labs
El-Tronics Inc.
Engineering Res. & Devel.
Epic, Inc.
Esterline-Angus
F. R. Machine Works
Farnsworth Electronics
Federal Telephone & Radio
Feiler Engrg.
Furst Electronics
GE, Apparatus Sales
GE Clock & Timer Dept.
Gates Radio Co.
General Radio Co.
Gertsch Products
Harvey Radio Labs.
Hastings-Raydist
Hathaway Instr. Co.
Helipot Div.
Hewlett-Packard
Hickok Electcl. Instr.
Hupp Instrumentation
Hycon Electronics
I-L-S Instr. Corp.
Internat. Devel. & Res.
J-B-T Instruments
Kay Electric
Kellogg Switchboard
Knights Co.
Lab. for Electronics
Lampkin Lab.
Lavorie Labs.
Leeds & Northrup
M B Mfg. Co.
Magnetic Instr. Co.
Marconi Instruments
Maxson Instr. Div.
Measurements Corp.
Metron Instr. Co.
Microwave Assocs., Inc.
Millen Mfg. Co.
Minnesota Electronics
Mohawk Electronics
New London Instr. Co.
Northam Electronics
Panoramic Radio Prods.
Performance Measmts.
Physics Res. Labs.
Polytechnic Res. & Devel.
Potter Aeronautical Co.
Potter Instr. Co.
Probescope Co.
Radiation Instr. Devel.
Radio City Products
Radio Frequency Labs.
Ram Meter, Inc.
Ramapo Engrg. Co.
Ramo-Wooldridge
Ransom Research
RCA Div.
Reiner Electronics
Roller-Smith
Rowe Radio Research
Sanborn Co.
Sensitive Res. Instr.
Servo Corp. of Amer.
Sheffield Corp.
Shepard Labs.
Sherron Metallic
Simpson Electric
Sound Apparatus Co.
Sperry Gyroscope
Spivey, Inc., James S.
Std. Elect. Time Co.
Stewart Instr. Co.
Sunshine Scientific
Systron Corp.
Taylor Instr. Cos.
Teletronics Labs., Inc.

Thordarson-Meissner
Triplett Electcl. Instr.
United Optical
Varo Mfg. Co., Inc.
Virginia Electronics
WacLine, Inc.
Walkirt Co.
Wang Labs., Inc.
Waugh Engrg. Co.
West Coast Electronics
Westronics, Inc.
Westberg Mfg. Co.
Westinghouse Electric
Weston Electcl. Instr.
Westport Electric

FREQUENCY INDICATORS, Microwave, including Wavemeters

Admittance-Namco
Amerac, Inc.
Amer. Electroneering
Amer. Mach. & Foundry
Antenna Research Lab.
Avion Div.
Berkeley Div.
Browning Labs.
Clarke Instr. Corp.
Cubic Corp.
DeMornay-Bonardi
Electo Impulse Labs.
Electro-Tech Equipt. Co.
Electron-Radar Prods.
Electronic Devel. Co.
Farnsworth Electronics
Federal Telephone & Radio
F. R. Mach. Works
GE
General Radio
Gertsch Products
Hewlett-Packard
Hycon Electronics
Jones Electronics
Kay Electric
Kearfott Co.
Lavoie Labs.
Linear Equipt. Labs.
Marconi Instruments
Maxson Corp.
Mico Instr. Co.
Microwave Assocs., Inc.
Millen Mfg. Co.
Narda Corp.
Polarad Electronics
Polytechnic Res. & Devel.
RCA Div.
Radiation, Inc.
Radio City Products
Ramo-Wooldridge
Simpson Electric
Sperry Gyroscope
Std. Electronic Res.
Sylvania Elect. Prods.
Thompson Products
Vectron, Inc.
WacLine, Inc.
Walkirt Co.

FREQUENCY INDICATORS, Vibrating Reed

Aero Instr. Co.
Amer. Mach. & Foundry
Askania-Werke A.G.
Biddle Co., James G.
Bronoptics Co.
Browning Labs.
Electro-Tech Equip.
Epic, Inc.
Furst Electronics
J-B-T Insts., Inc.
Sticht Co., Herman H.
Triplett Electcl. Instr.
WacLine, Inc.

FREQUENCY REGULATORS

Allis-Chalmers
Amer. Electronics, Inc.
Avion Div.
Bendix, Eclipse-Pioneer
Bendix, Red Bank
Berkeley Div.
Bogue Electric Mfg.
Burlington Instr. Corp.
C. G. S. Labs.
Collins Radio
Cutler-Hammer
Electric Regulator Corp.
Electronic Spec. Co.
Engineered Magnetics
Fecker, Inc., J. W.
General Controls
GE, Apparatus Sales
GE Clock & Timer Dept.
General Magnetics, Inc.
Helipot Div.
Howell Instr. Co.
Inst. Devel. & Mfg. Corp.
Kearfott Co.
Kellogg Switchboard
Leeds & Northrup
Magnetic Amplifiers Inc.
Magnetic Instr. Co.
Magnetic Research Corp.
Maxson Corp.
Maxson Instr. Div.
Mercury Electronic Co.
Metrotype Corp.
Minn-Honeywell, Boston Div.
National Co.
Natl. Aircraft Corp.
Perfex Corp.
Pitometer Log Corp.
Potter Aeronautical Co.
Potter Instr. Co.
Radio City Products
Raytheon Mfg.
Riverbank Labs.
Sorensen & Co.
Standard Elect. Time
Sunshine Scientific
Thompson Products
Thordarson-Meissner
Varo Mfg. Co.
Vectron, Inc.
WacLine, Inc.
Westinghouse Electric

FREQUENCY RESPONSE RECORDERS

ACF Electronics
Alden Electron & Impulse
Amer. Mach. & Foundry
Berkeley Div.
Bristol Co.
Brush Electronics
Edin Co.
Federal Telephone & Radio
Fischer & Porter
Furst Electronics
GE Apparatus Sales
Industrial Control Co.
Marconi Instruments
Martin-Hubbard
Kay Electric
Panoramic Radio Prods.
Probescope Co.
Servo Corp. of America
Sound Apparatus Co.
Taylor Instr. Cos.
Techno Instr. Co.

FREQUENCY STANDARDS, see Standards, Frequency

FRITTED GLASS FILTERS and APPARATUS, see Laboratory Apparatus

FUEL ANALYSIS APPARATUS, see Gas Analyzers, also Coal Testers, also Combustion Control, also Boiler Room Instruments

FUEL FLOW INDICATORS, see Flow

FURNACE ATMOSPHERE GENERATORS

GE, Apparatus Sales
Gordon Co., Claud S.
Hevi Duty Electric Co.
W. S. Kemp Mfg., C. M.
L & L Mfg.
Lindberg Engrg. Co.
Rockwell Co., W. S.
Natural Gas Equipt., Inc.
Pacific Scientific
Surface Combustion Corp.

FURNACE CONTROL SYSTEMS (see also Boiler Room Instruments, also Combustion Safeguards)

A-P Controls Corp.
Acro Mfg. Co.
Allen-Bradley Co.
Arca Regulators, Inc.
Askania Regl. Co.
Askania-Werke, A. G.
Assembly Products
Automatic Electric
Autom. Switch Co.
Autom. Timing & Controls
Bailey Meter Co.
Barber-Colman
Barnes Co., F. W. & J.
Baso, Inc.
Beck Co.
Beckman Insts
Blue M. Electric
Bristol Co.
Burling Instr. Co.
Burrell Corp.
Cash Co., A. W.
Clark Controller Co.
Cleveland Fuel Equipt.
Cook Electric
Cutler-Hammer
Cybertronic Corp.
Dahl & Co., G. W.
Damol Corp.
Denver Fire Clay Co.
De-Tec-Tronic Corp.
Dickson Co.
Eclipse Fuel Engrg. Co.
Electric Hotpack
Electronic Prod. Co.
Ellison Draft Gage
Engelhard, Inc.
Ess Instr. Co.
Fielden Instr. Div.
Fischer & Porter Co.
Foxboro Co.
Fox Valley Intsr.
Fuel Watchman
Fulton-Sylphon Div.
Furnace Control Sytsems
General Controls Co.
GE, Apparatus Sales
General Regulator Corp.
Gleason-Avery
Gordon Co., Claud S.
Hagan Chem. & Controls
Hammel-Dahl
Hays Corp.
High Vacuum Equipt. Corp.
Huppert Co., K. H.
Indust. Control Panel Co.
Jelrus Co.
Larson Instr. Co.
Lake Erie Electric
Leeds & Northrup
Lindberg Air
Marsh Corp. Jas. P.
Mason-Neilan Div.
Mercoid Corp.
Minneapolis-Honeywell, Boston Div.
National Airoil Burner
Natural Gas Equipmt., Inc.
Nuclear Res. Corp.
Paragon Electric
Partlow Corp.
Perfex Controls Div.
Pimex, Inc.
Pyrometer Instr. Co.
R-S Prods. Corp.
Reliance Instr. Mfg. Corp.
Republic Flow Meters
Rockwell Co., W. S.
Semimetals, Inc.
Shallcross Controls
Soreng Products
Spence Engrg. Co.
Surface Combustion Corp.
Taylor Instr. Cos.
Teleflex, Inc.
Thermo Elect. Mfg.
Thermom. Corp. of Amer.
Thwing-Albert
Tork Clock
Trerice Co., H. O.
United Elect. Controls
West Instr. Corp.
Westinghouse Electric
Weston Electcl. Instr.
Wheelco Instr. Div.
White Mfg. Co.
White-Rodgers
Wilgus Mfg. Co.
Worner Electronic Devices

FURNACES, including Calibrating, Annealing and Laboratory (see also Laboratory Apparatus, also Ovens)

Amer. Gas Furnace Co.
Amer. Instr. Co.
Amer. Research
Baker & Co.
Blue M Electric
Burrell Corp.
Central Scientific
Cooley Elect. Mfg.
Con. Electrodyn., Roch.
Despatch Oven Co.
Dietert Co.
Distillation Products
Eclipse Fuel Engrg.
Electric Hotpack
Electro-Tech Equip.
Ferner Co.
Fisher Scientific
Gallien, R. P.
GE
Gordon Co., Claud S.
Greiner, Emil
Grieve-Hendry
Hevi Duty Electric
High Vacuum Equipt. Corp.
Hoskins Mfg. Co.
Huppert Co.
Jelrus Co.
Johnson Gas Appliance
Kahle Engrg. Co.
Kinney Mfg. Div.
L & L Mfg.
Laboratory Equipt. Co.
Leeds & Northrup
Lepel High Freq. Labs.
Lindberg Engrg. Co.
Litton Industries
Lucifer Furnaces
Machlett & Son
Marshall Co.
Metalab Equipt. Div.
Minneapolis-Honeywell, Boston Div.
Modern Electrical Lab.
Modern Lab. Equipt. Co.
NRC Equip. Corp.
Pacific Scientific
Pimex, Inc.
Precision Scientific
R-S Prods. Corp.
Research Appliance Co.
Rockwell Co., W. S.
Sargent & Co.
Schaar & Co.
Selas Corp.
Shallcross Controls
Sherr Co., Inc.
Stokes Corp., F. J.
Stokes Mach. Co.
Surface Combustion Corp.
Temp. Engrg. Corp.
Tenney Engrg. Co.
Testing Machines Inc.
Thermo Dental Mfg.
Thermo Electric Mfg.
Thwing-Albert
Torrance Glass Color Wks.
Westinghouse Electric
White Dental Mfg.
Young Bros. Co.

FURNITURE, Laboratory, see Laboratory

FUSE BLOCKS

Aerolite Electronics
Aerovox Corp.
Akron Porcelain Co.
Alden Products
Ampco Mfg. Co.
Brit. Electronic Sales
Cinch Mfg. Co.
Continental-Diamond Fibre
Cook Electric
Cutler-Hammer, Inc.
Federal Screw Prods.
GE, Apparatus Sales
Insuline Corp. of Amer.
Jones Div., Howard B.
Kulka Electric
Littelfuse, Inc.
Molded Insulation Co.
Pyle-National Co.
R-B-M Manufacturing
Rogan Bros.
Sightmaster Corp.
Stupakoff Div.
U. S. Instr. Corp.
Westinghouse Electric

FUSES, Instrument

Alden Products
Automatic Electric
Baker & Co.
Brit. Electronic Sales
Chatham Electronics
Cook Electric
Cutler Hammer
Federal Telephone & Radio
GE
Grammes & Sons
Kellogg Switchboard
Littelfuse, Inc.
Meter Devices Co.
Newark Electric Co.
Sightmaster Corp.

GAGE BLOCKS, see Dimensional Gages, Mechanical

GAGE BLOCKS, Surface Finish, see Dimensional Gages, Mechanical

GAGE COCKS see Valves, Gage Cocks

GAGE GLASS ILLUMINATORS, see Boiler Room Instruments

GAGE GLASS TUBES

Ace Glass Inc.
Bache & Co., Semon
Corning Glass Works
Fischer & Porter
Friedrich & Dimmock
Nester Co., L. G.
Phoenix Prec. Inst.
Prec. Glass Prods. Co.

GAGE MOVEMENTS, see Pressure Gage Movements

GAGE TESTERS, Deadweight, see Pressure Instrument Calibrators, Deadweight

GAGE TESTERS, see Manometers

GAGES, see Object of Measurement and Control

GAGES, Adjustable Length, see Dimensional Gages

GAGES, Air, Comparator, see Dimensional Gages

GAGES, Air-gap, see Dimensional Gages

GAGES, Alarm, see Pressure Gages with Alarm

GAGES, Altitude (Boiler), see Boiler Room Instruments

GAGES, Amplifying, see Dimensional Gages

GAGES, Automatic Sorting, see Sorting Equipment

GAGES, Bore, see Dimensional Gages

GAGES, Bourdon, see Pressure Gages

GAGES, Caliper (Dial), see Dimensional Gages

GAGES, Center, see Dimensional Gages

GAGES, Chemical, see Pressure Gages, Chemical

GAGES, Coating Thickness, see Dimensional Gages

GAGES, Comnarator, see Dimensional Gages

GAGES, Compression, see Engine Test, also Load, also Weight, also Testing Machines

GAGES, Concentricity, see Dimensional Gages

GAGES, Contour, see Dimensional Gages

GAGES, Cylinder, see Dimensional Gages

GAGES, Dead Weight, see Pressure Instrument Calibrators, Deadweight

GAGES, Depth, Linear, see Dimensional Gages

GAGES, Depth, Navigational, see Depth Gages

GAGES, Differential Pressure, see Pressure, Differential

GAGES, Draft, see Draft Gages

GAGES, Drill Grinding, see Dimensional Gages

GAGES, Feeler, see Dimensional Gages

GAGES, Film Thickness, see Dimensional Gages

GAGES, Gas, see Pressure or Vacuum Gages

GAGES, Height, see Dimensional Gages

GAGES, High Vacuum, see Vacuum Gages

GAGES, Hook, see Surveying Instruments

GAGES, Hydrostatic, see Level Gages, Liquid

GAGES, Internal Dial, see Dimenisonal Gages

GAGES, Ionization, see Radioactivity Detectors

GAGES, Limit, see Dimensional Gages

GAGES, Loss of Head, see Water Works Instruments

GAGES, Mercury, see Manometers

GAGES, Micrometer, see Dimensional Gages

GAGES, Optical, see Dimensional Gages

GAGES, Paint Film, see Dimensional Gages, also Paint

GAGES, Paper Thickness, see Dimensional Gages, also Paper

GAGES, Pipe, see Dimensional Gages

GAGES, Pressure, see Pressure

GAGES, Profile, see Dimensional Gages

GAGES, Rain, see Hydrologic Instruments

GAGES, Receiver, see Receiver Indicators

GAGES, Rifle Bore, see Dimensional Gages

GAGES, Ring, see Dimensional Gages

GAGES, Screw Thread, see Dimensional Gages

GAGES, Sliding, see Dimensional Gages

GAGES, Snap, see Dimensional Gages

GAGES, Strain, see Strain Gages

GAGES, Surface Finish, see Dimensional Gages

GAGES, Tank, see Level

GAGES, Telescoping, see Dimensional Gages, also Telescopes

GAGES, Temperature, see Thermometers

GAGES, Thickness, see Dimensional Gages

GAGES, Thickness, Eddy Current, see Thickness Gages

GAGES, Thickness, Magnetic, see Thickness Gages

GAGES, Thickness, Ultrasonic, see Thickness Gages

GAGES, Thread, see Dimensional Gages

GAGES, Tide, see Hydrologic Instruments

GAGES, Tire, see Pressure

GAGES, Torque, see Torque

GAGES, Vacuum, see Vacuum

GAGES, Venturi, see Flowmeters, Inferential

GAGES, Vibration, see Vibration

GAGES, Water Level, see Level

GAGES, Wind, see Meteorological Instruments

GAGES, Wire Measuring, see Dimensional Gages

GALVANOMETER MOVEMENTS

Amer. Metrix Corp.
Assembly Products
Bristol Co.
Century Electronics
Century Geophysical
Consol. Electrodynamics
Edin Co.
Electronics, Inc.
Epic Inc.
G. M. Labs.
GE
Geophysical Instr. Co.
Giannini & Co.
Hathaway Instr. Co.
Hickok Elec. Instr.
Illinois Testing Labs.
J-B-T Instruments
Leeds & Northrup
Meters, Inc.
Offner Electronics, Inc.
Phaostron Co.
Pimex, Inc.
Rubicon Co.
Shallcross Mfg.
Simpson Electric
Stoelting Co.
Texas Div., Brush
Texas Insts., Inc.
Thwing-Albert
Welch Mfg. Co., W. M.
Winslow Co., Inc.

GALVANOMETERS, AC

Assembly Products
Associated Research
Biddle Co., James G.
Bristol Co.
Brush Electronics
Cambridge Instr. Co.
Central Scientific
Century Geophysical
Consol. Electrodynamics
Dale Instruments
Edin Co., Inc.
Electro-Mechanical Res.
Electro-Tech. Labs.
Epic Inc.
Fed. Tlephone & Radio
Fielden Instr. Div.
GE
General Radio
G. M. Laboratories, Inc.
Greibach Instr. Co.
Hamilton Watch
Hathaway Instr. Co.
Heiland Division
Hickok Electcl. Instr.
Leeds & Northrup
Metron Instr. Co.
Newark Electric Co.
Pfaltz & Bauer
Rawson Electcl. Instr.
RCA Div.
Roller-Smith
Rubicon Co.
Sanborn Co.
Seismograph Service Corp.
Sensitive Res. Instr.
Shallcross Mfg. Co.
Simpson Electric
Texas Insts. Co.
United Optical
Welch Mfg. Co., W. M.
Weston Electcl. Instr.

GALVANOMETERS, Astatic

Bristol Co.
Cambridge Instr. Co.
Central Scientific
Chicago App. Co.
Dale Instruments
Epic Inc.
Geotechnical Corp.
Hamilton Watch
Hathaway Instr. Co.
Hickok Elec. Instr.
Leeds & Northrup
Phaostron Co.
Rawson Electcl. Instr.
Ruska Instr. Corp.
Sensitive Res. Insts.
Welch Mfg. Co., W. M.
Westinghouse Electric

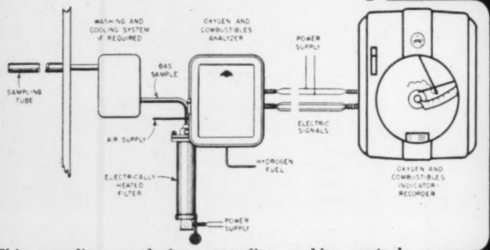
GALVANOMETERS, DC

Acton Labs.
Assembly Products
Associated Research, Inc.
B & H Instr. Co.
Borden Engrg. Div.
Bristol Co.
Brush Electronics
Cambridge Instr. Co.
Central Scientific
Century Geophysical
Clevite Res. Center
Coleman Instr. & Mfg.
Consol. Electrodynamics
Dale Instruments
DeJur-Amsco
Edin Co., Inc.
Edison Inc., Thomas A.
Electric Des. & Engrg.
Electro-Mechanical Res. Co.
Electronic Devel. Lab.
Engelhard, Chas., Inc.
Engrg. Enterprises
Epic Inc.
Federal Telephone & Radio
Fielden Instr. Div.
G. M. Labs.
GE, Apparatus Sales
Geotechnical Corp.
Gray Instr. Co.
Greibach Instruments
Hamilton Watch
Hathaway Instr. Co.
Heiland Div.
Hickok Electcl. Instr.
Hormell Instr. Co.
Industrial Control Co.
J-B-T Instruments
Jarrell-Ash
Kin Tel
Leeds & Northrup
Marion Electcl. Instr.
Meters, Inc.

GAS ANALYZERS

BAILEY METERS

for Oxygen & Combustibles
Content of Gases


WASHING AND COOLING SYSTEM IF REQUIRED
OXYGEN AND COMBUSTIBLES ANALYZER
POWER SUPPLY
GAS SAMPLE
SAMPLING TUBE
ELECTRIC SIGNALS
AIR SUPPLY
HYDROGEN FUEL
ELECTRICALLY HEATED FILTER
OXYGEN AND COMBUSTIBLES INDICATOR-RECORDER
POWER SUPPLY

This sampling, analyzing, recording and/or controlling system provides continuous and independent analysis of oxygen and/or combustibles. Analyzer uses hydrogen and/or air for catalytic combustion of sample. Minimum range: 0-5%; maximum range: 0-25%.

Ideal combustion guide and safety device for furnaces, kilns, and heaters. Analyzes and controls output from atmosphere generators.

Request Product Specification:

E65-1 for O_2 and Comb. Analyzer
E65-2 for O_2 Analyzer
E65-3 for Comb. Analyzer
E65-5 for HEAT PROVER
HEAT PROVER: Portable Combustion Analyzer

BAILEY METER COMPANY
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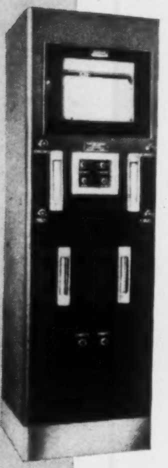
GOW-MAC THERMAL CONDUCTIVITY
GAS ANALYZERS

—for GAS PURITY, GAS MIXING AND PROCESS CONTROL OF



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High Energy Fuels
Nitrogen
Oxygen
Special Atmospheres
— And Many Others

Other Gow-Mac Analyzers include:

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"GAS MASTER"— For closely linked laboratory systems. Has all components in a single package.

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PLANT STREAM T/C CELLS — For continuous service.

ANEMOMETER (MANOMETER) CELL — For the measurement of very low flow and pressure.

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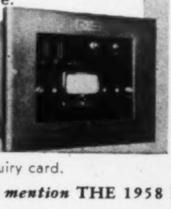

GOW-MAC INSTRUMENT CO.
100 Kings Road, Madison, N.J.
Telephone: FRontier 7-3450

For more information circle 140 on inquiry card.

Metron Instrument Co.
Mil Instr. Corp.
Minneapolis-Honeywell
  Boston Div.
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Photron Instr. Co.
Physics Res. Labs.
Pimex, Inc.
Prec. App. Co.
Pyrometer Instr. Co.
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RCA Div.
Rawson Electcl. Instr.
Roller-Smith
Rubicon Co.
Sanborn Co.
Scientific Specialties
Seismograph Service Corp.
Sendur Mfg. Co.
Sensitive Res. Instr.
Shallcross Mfg.
Simpson Electric
Southw. Ind. Electronics
Stoelting Co., C. H.
Technology Instr. Div.
Texas Insts., Inc.
Texas Instrs., Ind. Div.
Thwing-Albert
Triplett Elect. Instr.
United Optical
Welch Mfg. Co., W. M.
WacLine, Inc.
Westinghouse Electric
Weston Electcl. Instr.
Winslow Co.

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Consol. Electrodynamics
Edin Co., Inc.
Hamilton Watch
Hickok Elec. Instr.
Kin Tel
Magnetic Industries
Maurer Inc., J. A.
Rubicon Co.

GALVANOMETERS, Reflecting

Associated Research
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Berndt-Bach
Brush Electronics
Cambridge Instr. Co.
Central Scientific
Century Electronics & Insts.
Century Geophysical
Coleman Instruments
Consol. Electrodynamics
Edin Co., Inc.
Epic, Inc.
Ercona Corp.
Federal Telephone & Radio
GE, Apparatus Sales
G-M Labs.
Geotechnical Corp.
Hamilton Watch
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Heiland Div.
Hormell Instr. Co.
Howell Instr. Co.
Jarrell-Ash
Leeds & Northrup
Magnetic Industries
Maurer Inc., J. A.
Midwestern Instr. Co.
Pancro Mirrors, Inc.
Pfaltz & Bauer
Phoenix Prec. Instr.
Physics Research Labs.
Pimex, Inc.
Rawson Electcl. Instr.
Rubicon Co.
Sanborn Co.
Seismograph Service Corp.
Shallcross Mfg. Co.
Southw. Ind. Electronics
Sprengnether Instr. Co.
Texas Insts., Inc.
Texas Instrs., Ind. Div.
Thwing-Albert
United Optical
Welch Mfg. Co., W. M.

GALVANOMETERS, Suspension Strip

Berndt-Bach
Century Electronics & Insts.
Consol. Electrodynamics
Epic Inc.
GE, Apparatus Sales
Geotechnical Corp.
Howell Instr. Co.
Leeds & Northrup
Pimex, Inc.
Rawson Electcl. Instr.
Shallcross Mfg.
Welch Mfg. Co., W. M.

GALVANOMETERS, Vacuum-tube

Acton Labs.
Associated Research
Beckman Div.
Bristol Co.
Electronic Devel. Lab.
Electronic Measurements
Electro Prods. Lab.
Engineering Labs.
General Radio
Hamilton Watch
Hathaway Instr. Co.
Heiland Div.
Hickok Elec. Instr.
Industrial Control Co.
Keithley Instrs., Inc.
MacDonald Co., W. S.
Measurements Corp.
Millivac Instruments
Minneapolis-Honeywell,
  Boston Div.
RCA Div.
Rockwell Engrg. Co.
Sanborn Co.
Scient. Inst. Dev. Lab.
Shallcross Mfg.
Varo Mfg. Co.
Weston Electcl. Instr.

GALVANOMETERS, Vibration

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Century Geophysical
Consol. Electrodynamics
Epic, Inc.
Hamilton Watch
Hathaway Instr. Co.
Heiland Div.
Leeds & Northrup

GALVANOSCOPES

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Jarrell-Ash
Stoelting Co.
Welch Mfg. Co., W. M.

GAS ANALYZERS, Air

Allied Engrg. Div.
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Beckman Div.
Beckman, Inc., Arnold O.
Beckman Instrs.
Bendix-Friez
Bristol Engrg. Corp.
Burrell Corp.
Cambridge Instr. Co.
Central Scientific
Consol. Electrodynamics
Cook Electric
Curtiss-Wright
Davis Emergency Equipt.
Engelhard, Inc., Chas.
Fish-Schurman
Fisher Scientific
GE, Apparatus Sales
Gow-Mac Instr. Co.
Greiner Glassblowing Lab.
Hays Corp.
Hebler Co.
Instrumentation Assoc.
Johnson-Williams
Jordan Electronic Mfg.
Leeds & Northrup
Mercoid Corp.
Mine Safety Appliances
National Instr. Lab.
Perkin-Elmer
Permutit Co.
Phoenix Prec. Inst.
Process & Instruments
Refinery Supply Co.
Sargent & Co.
Scientific Glass App.
Staplex Co.
Taller & Cooper
Thermco Labs.
Victory Engrg. Corp.
Weston Electcl. Instr.
Willson Products

GAS ANALYZERS, Ammonia

Applied Physics Corp.
Baird-Atomic
Baker & Co.
Beckman Inc., Arnold O.
Beckman Instrs.
Burrell Corp.
Consol. Electrodynamics
Davis Insts. Div.
Engelhard, Chas., Inc.
GE
Gow-Mac Instr. Co.
Hallikainen Instruments
Hays Corp.
Hebler Co.
Johnson-Williams
Kaye Devel. Co.
Mercoid Corp.
Mine Safety Appliances
Mira Scient. Insts.
Natl. Inst. Labs
Perkin-Elmer
Permutit Co.
Process & Instruments
Sargent & Co.
Taller & Cooper
Thermco Labs.
Victory Engrg. Corp.
Weston Electcl. Instr.

GAS ANALYZERS, Carben Dioxide and/or Carbon Monoxide (see also Boiler Room Instruments, also Combustion)

Ace Glass, Inc.
Allied Engrg. Div.
Amer. Electronic Labs.
Amer. Electronics
Applied Physics Corp.
Atmosphere Control
Bacharach Indust. Instr.
Bailey Meter Co.
Baker & Co.
Beckman Div.
Beckman, Inc., Arnold O.
Beckman Insts.
Bendix-Friez
Bristol Co.
Bristol Engrg. Corp.
Bullard Co.
Burrell Corp.
Cambridge Instr. Co.
Central Scientific
Chicago Apparatus Co.
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Cleveland Fuel Equipt.
Curtiss-Wright Corp.
Davis Emergency Equipt.
Davis Insts. Div.
Daytronic Corp.
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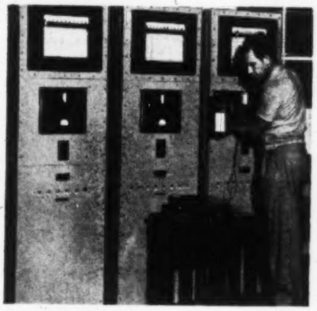
SYNONYMOUS WITH SAFETY

J-W

COMBUSTIBLE GAS INDICATORS AND ALARMS

For continuous multi- or single-point protection in areas where gas danger is always present, investigate these modern, reliable J-W models.

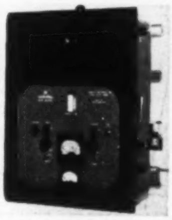


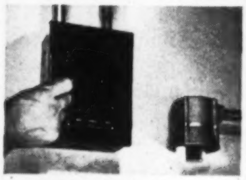
J-W Model RV Alarms

Sample and analyze air from 2 to 8 separate locations in sequence on a 30-second cycle. Recording instruments and explosion-proof construction are available on special order.

J-W Model SM Alarm

Continuously samples from one location. Indicates quantity of combustible gas present. Alarms at a pre-set level.





J-W Model E Alarm

Inexpensive instrument for detecting explosive gases in a single area. Control box mounts remote from sensing unit. Model EE also available with both detecting and indicating elements encased in an explosion-proof housing permitting installation of entire instrument in a hazardous or outdoor location.

J-W

For detailed data on these models and portable and custom-built J-W instruments and accessory equipment, contact the makers of top quality products for over 25 years:

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Palo Alto 12, California

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SAFETY SUPPLY CO. TORONTO, ONT.

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Electron Radar Prods.
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Engelhard, Chas., Inc.
Engineering Labs, Inc.
Fish-Schurman
Fisher Scientific
Foxboro Co.
GE
Gordon Co., Claud S.
Gow-Mac Instr. Co.
Greiner, Emil
Greiner Glassblowing Lab.
Hallikainen Instruments
Hays Corp.
Hebler Co.
Instrument Engrg. Serv.
Instrumentation Assoc.
Johnson-Williams
Jordan Electron Mfg. Co.
Kaye Devel. Co.
Kontes Glass
Kruger Instruments, Harold
Laboratory Equipt. Co.
Leeds & Northrup
Mine Safety Appliances
Mira Scient. Insts.
National Instr. Labs.
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Permutit Co.
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Republic Flow Meters
Sargent & Co.
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Scientific Instr. Co.
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Spinco Div., Beckman
Sun Electric Corp.
Taller & Cooper
Testing Machines, Inc.
Thermco Laboratories
Tigerman Engrg. Co.
Uehling Instr. Co.
Victory Engrg. Corp.
Viking Instruments
Will Corp.
Williams App. Co.

GAS ANALYZERS, Flue Gas, see Gas Analyzers, CO, O₂, etc.

GAS ANALYZERS, Hydrogen, Hydrogen Sulphide, Nitric Oxide, etc.

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Applied Physics Corp.
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Bailey Meter Co.
Baker & Co.
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Beckman Instrs.
Bristol Co.
Bristol Engrg. Corp.
Bullard Co.
Burrell Corp.
Cambridge Instr. Co.
Central Scientific
Chicago App. Co.
Cities Service Oil Co.
Connelly Co.
Consol. Electrodynamics
Davis Insts. Div.
Daytronic Corp.
Diatron Co.
Distillation Products
Electrical Dev.
Electron Radar Prods.
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Fisher Scientific
Foxboro Co.
GE, Apparatus Sales
Gow-Mac Instr. Co.
Greiner Glassblowing Lab.
Kontes Glass
Hallikainen Instruments
Hays Corp.
Hebler Co.
Heiland Div.
Industrial Insts., Inc.
Instrument Devel. Labs.
Instrument Engrg. Serv.
Jarrell-Ash
Johnson-Williams
Kahn & Co.
Kaye Devel. Co.
Kruger Instruments, Harold
Laboratory Equip.
Leeds & Northrup
Mine Safety Appliances
Mira Scient. Insts.
NRC Equipment
National Instr. Labs.
National Spectrographic
North Amer. Philips
Perkin-Elmer
Permutit Co.
Phoenix Prec. Instr.
Podbielniak, Inc.
Precision Scientific
Raytheon Mfg. Co.
Rubicon Co.
Sargent & Co.
Scam Instr. Corp.
Scientific Glass App.
Sunshine Scientific
Taller & Cooper
Thermco Labs.

Tigerman Engrg. Co.
Victory Engrg. Corp.
Viking Instruments
Willson Prods., Inc.
Zeiss, Inc., Carl

GAS ANALYZERS, Orsat

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Allied Engrg. Div.
Amer. Electronics, Inc.
Apex Scient.
Atmosphere Control
Bacharach Indust. Instr.
Bailey Meter Co.
Baker & Co., Inc.
Burrell Corp.
Central Scientific
Chicago App. Co.
Defender Instr. & Reg.
Dwyer Mfg. Co.
Ellison Draft Gage
Fish-Schurman
Fisher Scientific
Greiner, Emil
Greiner Glassblowing Lab.
Hays Corp.
Howe & French
Laboratory Equipt. Corp.
Podbielniak, Inc.
Prec. Thermom. & Insts.
Quality Electric
Sargent & Co.
Scientific Glass App.
Specialty Glass Co.
Taller & Cooper

GAS ANALYZERS, Oxygen

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Amer. Electronics, Inc.
Amer. Instr. Co.
Atmosphere Control
Bacharach Indust. Instr.
Bailey Meter Co.
Baker & Co.
Beckman Div.
Beckman, Inc., Arnold O.
Beckman Instr.
Bristol Co.
Burrell Corp.
Bush Assocs.
Cambridge Instr. Co.
Central Scientific
Chicago Apparatus Co.
Consol. Electrodynamics
Davis Instr. Div.
Defender Instr. & Reg.
Dorber Co.
Ellison Draft Gage
Engelhard, Chas., Inc.
Foxboro Co.
Gadgets, Inc.
GE
Gow-Mac Instr. Co.
Greiner Glassblowing Lab.
Hays Corp.
Instrument Engrg. Serv.
Instrumentation Assoc.
Jordan Electronic Mfg.
Laboratory Equipt. Corp.
Leeds & Northrup
Mine Safety Appliances
Mira Scientific Insts.
Moore Co., H. R.
NRC Equip Corp.
National Instr. Labs.
Phipps & Bird
Podbielniak, Inc.
Precision Scientific
Process & Instruments
Sargent & Co.
Scientific Glass App.
Scientific Instr. Co.
Superior Meter Co.
Taller & Cooper
Thermco Labs.
Universal Aviation
Victory Engrg. Co.
Weston Electcl. Instr.

GAS ANALYZERS, Nitrogen

Ace Glass Inc.
Aloe Co., A. S.
Amer. Electronics, Inc.
Baker & Co.
Beckman Div.
Beckman, Inc., Arnold O.
Beckman Instrs.
Boekel & Co.
Burrell Corp.
Bush Assocs.
Central Scientific
Chicago Apparatus Co.
Fisher Scientific
Gow-Mac Instr. Co.
Greiner Glassblowing Lab.
Hayes Corp.
Laboratory Construction
Laboratory Equipt. Corp.
Microchemical Service
Mine Safety Appliances
NRC Equip. Corp.
National Instr. Labs.
Permutit Co.
Podbielniak, Inc.
Precision Scientific
Rubicon Co.
Sargent & Co.
Scientific Glass App.
Taller & Cooper
Taylor & Co., W. A.
Thermco Labs.
Victory Engrg. Corp.
Weston Electcl. Instr.

GAS ANALYZERS, Sulphur Dioxide

Ace Glass Inc.
Allied Engrg. Div.
Amer. Electronics, Inc.
Applied Physics Corp.
Atmosphere Control
Bacharach Indust. Instr.
Baird-Atomic
Baker & Co.
Beckman, Inc., Arnold O.
Beckman Div.

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GAS ANALYSIS SYSTEMS

operating by catalytic combustion, electro-conductivity, thermal conductivity, and photochemical reactions.

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For the analysis of gases and vapors that ionize in water, directly or when decomposed by heat. Sensitive to small quantities.

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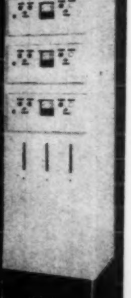

Continuous COMBUSTIBLE GAS ALARM SYSTEMS

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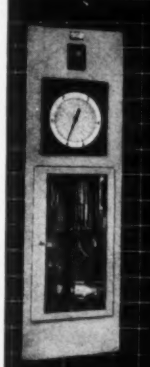

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Continuous measurement of oxygen in gaseous streams, 0-100 p.p.m. Outstanding for simplicity of operation, specific measurement of oxygen without interference from most other gases.

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Progressive Manufacturers of Gas Analysis Instruments

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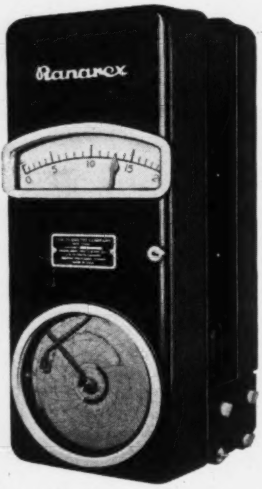
FOR SIMPLIFIED GAS ANALYSIS OR CONTROL

If the gas component you want to measure or control is related to the **specific gravity** of the gas, a RANAREX will measure it accurately, continuously, **without lag** and at **low cost.**

Works on a simple, mechanical principle . . . rugged, foolproof. Can be equipped for automatic control. Analyzes flue gas to cut fuel costs . . . aids quality control in heat-treating, chemical processing, oil refining . . . checks uniformity of fuel gas, etc.

• • •

For details, write to The Permutit Company, Dept. IAH, 50 West 44th St., New York 36, N. Y.



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Consol. Electrodynamics
Davis Instr. Div.
Engelhard, Chas., Inc.
Fish-Schurman
Foxboro Co.
Gow-Mac Instr. Co.
Greiner Glassblowing Lab.
Hays Corp.
Instrument Engrg. Serv.
Kontes Glass
Kruger Insts., Harold
Laboratory Equipt. Co.
Leeds & Northrup
Mine Safety Appliances
Mira Scientific Insts.
Perkin-Elmer
Precision Scientific
Sargent & Co.
Scientific Glass App.
Taller & Cooper
Technical Equipt. Co.
Thermco Labs.
Uehling Instr. Co.
Victory Engrg. Co.

GAS DENSITY METERS, see Density

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Baldwin-Lima-Hamilton
Barton Instr.
Bendix-Pacific
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Bowser & Co.
Bristol Co.
Brooks Rotameter
Cash Valve Mfg. Corp.
Century Electronics Insts.
Climax Div.
Control Specialty Corp.
Cutler-Hammer
Davis Regulator
Femco, Inc.
Fisher Governor
Foster Engrg. Co.
General Controls
Hagan Chem. & Controls
Hammarlund Mfg.
Hammel-Dahl
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Librascope, Inc.
Linde Co.
Manning, Maxwell & Moore
Mason-Neilan Div.
Minneapolis-Honeywell
  Indust. Div.
Natural Gas Equipt. Co.
Nelson Electric Mfg.
Penn Insts. Div.
R.K.L. Mfg. Co.
Rawson Electcl. Instr.
Republic Flow Meters
Research Controls
Rockwell Mfg. Co.
Scientific Instr. Co.
Shand & Jurs Co.
Smith Corp., A. O.
Sparton Cont. Systems
Squires Co., C. E.
Southw. Ind. Electronics
Std. Elect. Time Co.
Stratos Div.
Surface Combustion Corp.
Tracerlab Inc.
Weksler Thermom. Corp.

GAS LEAK INDICATORS, see Leak

GAS METERS, see Flowmeters

GAS METERS, Positive, see Flowmeters, Positive Displacement

GAS and VAPOR DISCHARGE TUBES, see Tubes, Discharge

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Auburn Mfg. Co.
Autom. & Prec. Mfg.
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Biggs Co., Carl H.
Blossom Mfg. Co.
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Chase Brass Copper
Chicago Cork Wks.
Chicago Rawhide Mfg.
Coaxial Connector Co.
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Continental Rubber Wks.
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Natl. Vulcan Fibre Co.
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Polymer Corp.
Products Res. Co.
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Republic Rubber Div.
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GASOLINE MILEAGE TESTERS, see Mileage Indicators

GAUGES, see Gages

GAUSSMETERS, see Magnetic Field Strength

GEAR ASSEMBLIES, see Gears, Precision

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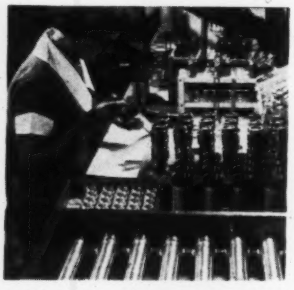

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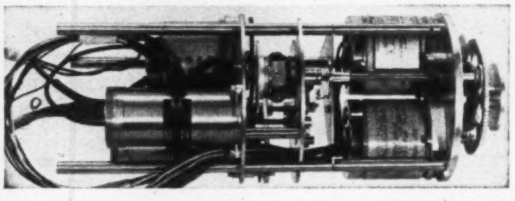
A representative gear assembly.



Facilities list and references available on request.
We can handle classified work.
Submit drawings for prompt quotation.

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2608 Merrick Road Bellmore, L. I., N. Y.

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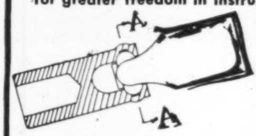
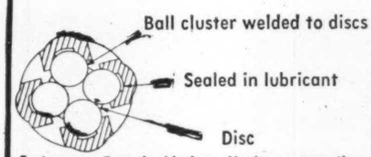
MINI-JOINTS*

***Miniature Universal Joints with ZERO BACKLASH**

for greater freedom in instrument design





Features • Zero backlash • Maximum operating angle of 30° • Lightweight • Sealed-in Lubrication

DIMENSIONS

Part NO.	ID	OD	OL	WGT.
SBS	SOLID	3/16	1-1/32	
1BS	.0938	"	"	.005
2BS	.125	"	"	"
3BS	.156	9/32	1-3/8	.013#
4BS	.1875	"	"	"
5BS	.2188	3/8	1-3/4	.031#
6BS	.250	"	"	"

(Also available as double joints)

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Instru-Lec Corp.
Instrument Gear Wks.
Merkle Korff Gear Co.
North Amer. Philips
Plumb Co., D. S.
Potter Aeronaut. Corp.
Precision Mfg. Co.
Preco Co.

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GEAR TEST INSTRUMENTS (see also Dimensional Gages)

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Brown & Sharpe
Brush Electronics
Daco Instrument
Dillon & Co.
Eitzen Co., Louis E.
Engineering Res. & Devel.
Engis Equipt. Co.
Ercona Corp.
Erdco Engrg. Co.
Ferner Co.
Fellows Gear Shaper
Grant Gear Works
Industrial Electronics
Internat. Res. & Dev.
Instru-Lec Corp.
Jerpbak-Bayless
Krouse Testing Machs.
Michigan Tool Co.
Micrometrical Mfg.
Morse Twist Drill
National Broach & Machine
Olsen Testing Mach.
Optical Gaging Prods.
Orban Co., Kurt
PIC Design Corp.
Scherr Co.
Simpson Electric
Size Control Co.
Van Keuren Co.
Vinco Corp.
Virginia Electronics
Warner & Swasey Res.
Zeiss, Inc., Carl

GEAR TRAINS Reducing, High Precision, see Gears Precision, including Gear Trains

GEARS, Precision, including Gear Trains, Gear Hubs, Pinions, etc.

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Alina Corp.
Allied Products Div.
Amer. Laubscher Corp.
Asam Mfg. Co.
Atlas Precision Prod.
Bayside Watch Tool
Beaver Gear Works
Bellmore Gear
Belock Instr.
Beryllium Corp.
Bodine Electric Co.
Boehme, H. O. Inc.
Bowmar Instr. Corp.
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Canoga Corp.
Chelsea Clock
Cincinnati Time Rec. Co.
Cramer Controls Corp.
Croname, Inc.
Daco Instrument
Dalmo Victor Co.
Daystrom Instrument
Dexter Machine Prods.
Dynamic Gear Co.
Elec. Tachometer Corp.
Elgin Nat'l Watch Co.
El Ray Motor Co.
Empire State Labs.
Erwood, Inc.
Fecker, Inc.
Feedback Controls
Ferner Co.
Ford Instr. Co.
Gallien, R. P.
Gap Instr. Co.
Gear Supply Co.
Geartronics Corp.
GE, Plastics Dept.
General Industries, Inc.
Globe Industries, Inc.
Gorton Machine Co.
Grant Gear Works
Greaves Mach. Tool
Gries Reproducer Corp.
Hall-Barkan
Hamilton Tool Co.
Hamilton Watch
Hartford Spec. Mach. Co.
Haydon Mfg. Co., Inc.
Heitz, Karl, Inc.
Helipot Div.
Howard Clock
I. T. E. Circuit Breaker
Indiana Gear Works
Ingersoll-Waterbury
Insco Company
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Instru-Lec Corp.
Instrument Gear Works
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Link Aviation
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Macnick Co.
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Micron-Gear Mfg.
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Natl. Vulcanized Fibre
New Haven Clock
Norden-Ketay
Oster Mfg. Co., John
Peck Spring
Perkins Mach. & Gear Co.
Phila. Gear Works, Inc.
PIC Design Corp.
Plumb Co., Inc.
Powdered Metal Prods.
Pratt & Whitney
Precision Mfg. Co.
Precision Products, Inc.
Precision Tube Co.
Preco Co.
Quaker City Gear Wks.
Radial Metal Prod.
RCA
Reeves Instr. Corp.
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Richardson Co.
Scherr Co.
Servomechanisms, Inc.
Seth Thomas Div.
Shakeproof, Inc.
Smith Machine Co.
Spaulding Fibre Co.
Specialty Screw Mach.
Sphinx American Co.
Steel Co., Herman D.
Sterling Precision Corp.
Sterling Prec. Instr. Co.
Swiss Amer. Jewel-Bearings
Swissmatic Products
Tech. Oil Tool Corp.
Telex, E-A Div.
Thomas Clock
Thompson Clock Co.
Transicoil Corp.
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Vallorbs Jewel Co.
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Western Gear Corp.
Wilder, Inc.
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Zagora Gears, Inc.

GEIGER-MUELLER COUNTERS, see Radioactivity

GEIGER-MUELLER TUBES, see Tubes, Geiger Mueller

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Bendix, Red Bank
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Columbia Electric Mfg.
Consolidated Avionics
Cubic Corp.
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Dalmotor Co.
Donner Scientific
Eastern Air Devices
Eicor, Inc.
Electric Indicator Co.
Electric Spec. Co.
Electro Engrg. Prods. Co.
Electro Mechano
Electronic Instr. Co.
El Ray Motor Co.
Fairbanks, Morse & Co.
GE, Apparatus Sales
Geophysical Instrument
Georator Corp.
Globe Industries
Helipot Div.
Hewlett-Packard
Holtzer-Cabot
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Inet-Palmer Div.
Instrument Motors Co.
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Kato Engrg.
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Krohn-Hite
Kollsman Instr. Corp.
Lear, Inc.
Leland Electric
Magnetic Instr. Co.
Marble-Card Electric
Marconi Instruments
Master Electric
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Oster Mfg. Co.
PM Industries
Rotating Components
Sangamo Electric
Servo Corp.
Servomechanisms, Inc.
Siemon Engrg. Co.
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Syntorque, Inc.
Task Corp.
U. S. Instr. Corp.
Vectron Inc.
WacLine, Inc.
Western Gear Corp.
Westinghouse Electric
Weston Electcl. Instr.

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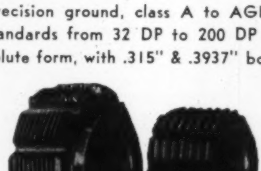
precision ground, class A to AGMA standards from 32 DP to 200 DP involute form, with .315" & .3937" bore.



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Made to order: Unground hobs for epicycloidal teeth gears and pinions, single tooth gear and pinion cutters, micro milling cutters, ground thread milling cutters.

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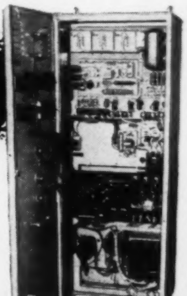
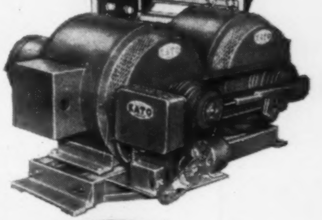
KATO VARIABLE FREQUENCY MOTOR GENERATOR SETS
For Better Bench Mock-Up Tests!



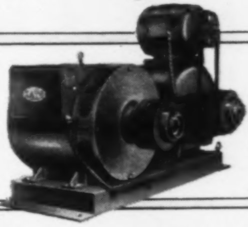
VARIABLE FREQUENCY MOTOR GENERATOR SETS
adjust 360 to 440 CPS. Generator mounted controls include reset buttons, limit switch. Motor and generator remain stationary. Vari-drive pulley adjustment is controlled by small motor.

CONTROL PANELS
Synchronous motor starter and generator controls including magnetic amplifier voltage regulator in cabinet.



REMOTE CONTROL
Remote control frequency adjustment varies speed from 1080 to 1320 rpm., thus varying frequency. Bench Mock-Up Test Station may be located anywhere.

MANUAL ADJUSTED MODELS
Continuously adjustable, holds speed accurately. Simple hand wheel controls variable-pitch V-belt arrangement permitting the often desired frequencies of 36, 40, 50, 60 and 70 cycles per second. Output indicated by frequency meter. Single, 3 phase or D. C. drive motors available. Also other frequency ranges.



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60 CYCLE
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GENERATORS
from 350 watts
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KATO *Engineering Company*

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Electronic Res. Assocs.
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Fed. Telephone & Radio
F.R. Machine Works
GE
Hickok Elec. Instr.
Howard Industries
Intercontinental Dynamics
International Telemeter
Kay Electric Co.
Krohn-Hite
Lavoie Labs.
Magnetic Instr. Co.
Marconi Instruments
Nalley, Leonard L.
Radio City Products
Rutherford Electronics
Servo Corp. of Amer.
Tektronix, Inc.
Telechrome, Inc.
Tel-Instr. Electronics
Wang Labs., Inc.
Waters Mfg.

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AiResearch Mfg. Co.
American Electronics
Bekey Electric
Bendix, Eclipse-Pioneer
Bendix, Red Bank
Bogue Electric Mfg.
Breeze Corporations
Cal Tronics Corp.
Carter Motor Co.
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Consolidated Avionics
Cyclohm Div.
Cubic Corp.
Dalmotor Co.
Detroits Controls Corp.
Devtronics, Inc.
Eastern Air Devices
Eicor, Inc.
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Electric Spec. Co.
Electro Engrg. Prods.
Electro Mechano
Electronic Instr. Co.
Electronic Res. Assccs.
El Ray Motor Co.
Esterline-Angus
Fairbanks, Morse & Co.
Federal Telephone & Radio
GE, Apparatus Sales
Geophysical Instr. Div.
Georator Corp.
Globe Industries, Inc.
Holtzer-Cabot
Howard Industries
Hycon Electronics
Inet-Palmer Div.
Instrument Motors Co.
Interelectronics Corp.
Jack Scient. Co., Bill
Lear Inc.
Lectronic Research
Leland Electric
Magnetic Instr. Co.
Marble-Card Electric
Master Electric
National Pneumatic Co.
Oster Mfg. Co., John
PM Industries
Reliance Elect. & Engrg.
Sangamo Electric
Servo Tek Products
Siemon Engrg. Co.
Small Motors Inc.
Spencer-Kennedy
Thordarson-Meissner
Western Gear Corp.
Weston Electcl. Instr.
Westinghouse Electric

GENERATORS, Pulse

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ARF Products
Aircraft Radio Corp.
Alfred Electronics
Alto Scientific
Amerac, Inc.
Amer. Electronic Labs.
Amplitronix Inc.
Arenberg Ultrasonic Lab.
Atomic Instr. Co.
Avion Div.
BJ Electronics
Bekey Electric
Berkeley Div.
Berkshire Labs.
Beva Lab.
Burroughs Electronics
Cal-Tronics Corp.
Canoga Corp.
Clegg Labs., Inc.
Computer Control Co.
Computer Instruments
Consolidated Avionics
Corbett Science Labs.
Cubic Corp.
Detectolab, Inc.
Detroit Controls Corp.
Devtronics, Inc.
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Electro-Pulse, Inc.
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Empire Devices Prod.
F.R. Machine Works
Farnsworth Electronics
Feiler Engrg. Co.
General Radio
Grass Instr. Co.
Hamner Electronics
Hewlett-Packard
Hickok Elec. Instr.
Hycon Electronics
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Kay Electric
Kearfott (Western)
Krohn-Hite
Lavoie Labs.
Levinthal Electronic Prods.
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NJE Corp.
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Nuclear Chicago
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Radiation Instr. Dev. Lab.
Radiation Instr. Co.
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RCA
Rese Engrg., Inc.
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Thordarson-Meissner
Ultrasonic Corp.
Universal Transistor
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Walkirt Co.
Wang Labs., Inc.
Weinschel Engrg. Co.
Westronics, Inc.

GENERATORS, Signal

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Allied Radio Corp.
Amerac, Inc.
Amer. Electroneering
Amer. Time Prods.
Authorized Mfrs. Service
Automatic Electric
Avion Div.
BJ Electronics
Bekey Electric
Boonton Radio
Borden Engrg. Co.
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Canoga Corp.
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Hycon Electronics
Indust. Test Equipt. Co.
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Reiner Electronics
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Sherron Metallic
Sierra Electronic Corp.
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Avion Div.
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Brush Electronics
Canoga Corp.
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DuMont Labs., Allen B.
Electric Indicator Co.
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GE, Electronics Div.
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Lavoie Labs.
Lindberg Engrg. Co.
Linear Equipt. Labs.
Marconi Instruments
Maxson Instr. Div.
McKenna Labs.
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Panoramic Radio Products
Philco Corp.
Polarad Electronics
Polytechnic Res. & Devel.
Precision Apparatus Co.
RCA Tube Div.
Radio City Prods.
Radioactive Products
Ramo-Wooldridge
Reiner Electronics
Servo Corp. of Amer.
Simpson Electric
Southw. Ind. Electronics
Superior, Inc.
Supreme, Inc.
Sylvania Elect. Prods.
Teletronics Lab.
Tel-Instr. Electronics
Telonic Industries
Thordarson-Meissner
Triplett Electcl. Instr. Co.
United Optical
WacLine, Inc.

GENERATORS, Synchro

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Amer. Mach. & Foundry
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Bendix, Eclipse-Pioneer
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Dalmotor Co.
Electric Indicator
Ford Instr. Co.
GE
Helipot Div.
Henschel Corporation
Kearfott Co.
Kollsman Instr. Corp.
Land-Air, Inc.
Lectronic Research Labs.
Magnavox Co.
Minneapolis Honeywell,
  Boston Div.
Oster Mfg. Co., John
Radio City Products
Sangamo Electric
Siemon Engrg. Co.
Small Motors Inc.
Sperry Gyroscope
Thordarson-Meissner
Western Gear Corp.
Westinghouse Electric

GENERATORS, Ultrasonic, see Ultrasonic Equipment, also Transducers

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Century Geophysical
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Brush Electronics
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Century Electronics & Insts.
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Potter Instr. Co.
Precision Radiation
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Sensitive Research Instr.
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Televiso Co.
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Trimount Instr. Co.
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U. S. Instr. Corp.
Universal Transistor
Varian Assocs.
Western Geophysical

GERMANIUM DIODES, see Diodes, Germanium

GERMANIUM RECTIFIERS, see Rectifiers, Dry Disc

GILLMORE NEEDLES, see Needles, Gillmore

GLARE METERS, see Gloss Meters

GLASS APPARATUS and PARTS, Special, see Laboratory Apparatus

GLASS BLOWING and GLASS BURNERS, see Glass Working Equipment

Bush Assocs.
Croname, Inc.
Crystal Glass Tube & Cyl.
Fisher Scientific
Glass Engrg. Labs.
Glass Insts., Inc.
Griebel Co.
Greiner Co., Emil
Greiner Glassblowing Lab.
Haydu Brothers
Kahle Engrg. Co.
Kontes Glass
Litton Industries
Nester Co.
Phoenix Prec. Instr.
Prec. Glass Prods.
Radiation Counter Labs.
Res. Specialties Co.
Scientific Instr. Co.
Teichert Engrg. Co.
Torrance Glass & Color
Uhrig Co., Joseph F.
Wakefield Industries
Zenith Optical Co.

GLASS, Circles and Ovals for Instruments

Apex Optical Corp.
Bache & Company, Semon
Behm Sons & Co., George
Brazilian Trading Co.
Bristol Co.
Bronoptics Co.
Buhl Optical
Can. Rad. & Uran. Corp.
Cast Optics
Chicago Dial Co.
Corning Glass Works
Croname, Inc.
Crystal Glass Tube & Cyl.
Davidson Mfg.
Dearborn Glass Co.
Dearborn Scientific
Eclipse Glass Co.
Edna Lite Co.
Engis Equipt. Co.
Esco Prods. Co.
Farrand Optical
Ferner Co.
Fish-Schurman
Freed, J. Melvin
Fuess, Inc.
G. R. S. Corp.
Geophysical Instr. Co.
Glass Insts., Inc.
Glass Products Co.
Glass Specialty
Glendale Optical
Goerz Amer. Optical
Greiner Glassblowing Lab.
Gurley, W. & L. E.
Harrison & Harrison
Hayward Scient. Glass
Horning, August W.
Inlaid Optical
International Optical
Johnston Glass Co.
Jones Optical Works
Lab. Optical Co.
Lancaster Glass
Leroy Clausing Co.
Lynn, Robert M.
Marsco Mfg.
Merry Instr. Co.
Meyer Opticraft
New Haven Clock
Northrop Anaheim
Pacific Univ. Prods.
Palos Optical
Pancro Mirrors, Inc.
Pan-technics, Ltd.
Phoenix Prec. Instr.
Photoplating Co.
Plummer & Kershaw
Polaroid Co.
Practo Photo Acces.
Prec. Glass Prods.
Prec. Prods. Co.
Regal Instr. Co.
Schneider-Cogswell
Scientific Instr. Co.
Simpson Optical
Steel Co., Herman
Technical Soldering Co.
Torrance Glass & Color
Unertl Optical Co.
United Lens Co.
Valley-National Corp.
Zenith Optical Co.
Zenith Optical Lab.

GLASS, Colored, for Filters

Alpha Amer. Corp.
Aristo Grid Lamp Prods.
Bache & Company, Semon
Bausch & Lomb Optical
Behm & Sons
Brazilian Trading Co.
Bronoptics Co.
Buhl Optical
Cast Optics
Corning Glass Works
Dearborn Glass Co.
Edna Lite Co.
Enteco Industries, Inc.
Esco Prods. Co.
Fish-Schurman
Freed, J. Melvin
Glass Insts., Inc.
Glass Specialty
Glendale Optical
Gordon Enterprises
Hayward Scientific
Inlaid Optical
Internat. Optical
Jaegers, A.
Lab. Optical Co.
Lancaster Glass
Leroy Clausing Co.
Lynn, Robert M.
Marsco Mfg. Co.
Pacific Univ. Prods.
Palos Optical
Pancro Mirrors, Inc.
Phoenix Prec. Instr.
Polaroid Corp.
Practo Photo Acces.
Prec. Glass Prods.
Prec. Prods. Co.
Regal Instr. Co.
Scientific Instr. Co.
Simpson Optical
Tinsley Labs.
Torrance Glass & Color
Valley National Corp.
Zenith Optical Lab.

GLASS ETCHING and FROSTING SOLUTION

Bache & Company, Semon
Behm & Sons
Benjamin & Assoc., L.
Dearborn Glass Co.
Edna Lite Co.
Ednal Co.
General Chemical Div.
Harshaw Chemical Co.
Industrial R. & T. Labs.
Marsco Mfg. Co.
Teichert Engrg. Co.
Torrance Glass & Color
Westinghouse Electric

GLASS, Heat Absorbing and Heat Tempered

Alfa Amer. Corp.
Amer. Optical
Bache & Company, Semon
Bausch & Lomb
Behm & Sons
Bronoptics Co.
Buhl Optical Co.
Chicago Dial Co.
Corning Glass Works
Crystal Glass Tube
Dearborn Glass Co.
Eastman Kodak Co.
Eclipse Glass Co.
Edna Lite Co.
Esco Products
Fish-Schurman
Fisher & Porter Co.
General Scientific
Glass Specialty
Greiner Glassblowing Lab.
Haward Scientific
Herron Optical
International Optical
Jaegers, A.
Kimble Glass Co.
Lancaster Glass
Lynn, Robert M.
Marsco Mfg. Co.
Palos Optical
Practo Photo Acces. Corp.
Regal Instr. Co.
Rogers and Clarke
Schneider-Cogswell, Inc.
Scientific Instr. Co.
Simpson Optical
Torrance Glass & Color
United Lens Co.
Universal Blank Corp.
Zenith Optical Co.

GLASS, Infrared Transmitting

Alfa Amer. Corp.
Amer. Optical Co.
Bache & Company, Semon
Bausch & Lomb
Behm & Sons
Bronoptics Co.
Cast Optics
Corning Glass Works
Dearborn Glass Co.
Eastman Kodak Co.
Edna Lite Co.
Enteco Industries, Inc.
Esco Products
Farrand Optical
Fish-Schurman
Glass Specialty
Harshaw Chemical
Hayward Scientific
Houston Technical Labs.
International Optical
Lab. Optical Co.
Lancaster Glass
Lynn, Robert M.
Marsco Mfg. Co.
Meyer Opticraft
Phoenix Prec. Instr.
Polaroid Corp.
Practo Photo Access. Corp.
Regal Instr. Co.
Rohm & Haas
Servo Corp. of Amer.
Simpson Optical
Texas Instr., Inc.
Torrance Glass & Color
Zenith Optical Lab.

GLASS, Low Reflecting Surfaces

Amer. Optical Co.
Bache & Company, Semon
Bausch & Lomb
Behm & Sons
Boehmke Optical
Bronoptics Co.
Buhl Optical
Burke & James
Can. Rad. & Uran. Co.
Chicago Dial Co.
Corning Glass Wks.
Crystal Research Labs.
Dearborn Glass Co.
Dearborn Scientific
Distillation Products
Dome Precision Corp.
Eclipse Glass Co.
E & S Optical
Edmund Scientific
Edna Lite Co.
Esco Products
Fish-Schurman
Fischer & Porter Co.
Gaertner Scientific
General Scientific
Green Rectifier Co.
Gurley, W. & L. E.
International Devel. Co.
International Optical
Jaegers, A.
Keim Prec. Mirrors
Lancaster Glass
Leroy Clausing Co.
Lynn, Robert M.
Marsco Mfg. Co.
Metavac Inc.
Micromat Co.
Miller Instr. Co.
National Research Corp.
Northrop Anaheim
Optical Coating Lab.
Optical Film Engrg. Co.
Pacific Optical
Pacific Univ. Prods.
Palos Optical
Pancro Mirrors, Inc.
Penberthy Instr. Co.
Phoenix Prec. Instr.
Plummer & Kershaw
Practo Photo
Regal Instrument Co.
Renick Co., L. C.
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GLASS, Photosensitive

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Bush Assocs.
Corning Glass Works
Fish-Schurman
H. & O. Co.
Internat. Glass Corp.
Precision Products
Regal Instr. Co.

GLASS, Raw, Optical and Molded Blanks (see also Lenses, Bullseyes)

Alfa Amer. Corp.
Bache & Company, Semon
Bausch & Lomb
Bronoptics Co.
Buhl Optical
Can. Rad. & Uran.
Chicago Dial Co.
Corning Glass Works
Eastman Kodak Co.
Edna Lite Co.
Esco Products
Fish-Schurman
Gordan Co., Claud S.
Haydu Brothers
Hayward Scientific
Inlaid Optical Corp.
International Glass
Jaegers, A.
Lynn, Robert M.
Marsco Mfg. Co.
Nikon, Inc.
Palos Optical
Regal Instr. Co.
Swift & Anderson, Inc.
Torrance Glass & Color
United Lens Co.
Universal Blank Corp.
Zenith Optical Lab.
Zoomar Corp.

GLASS, Shatterproof for Instruments

Bache & Company, Semon
Behm & Sons
Bristol Co.
Bronoptics Co.
Buhl Optical
Cast Optics
Chicago Dial Co.
Dearborn Glass Co.
Edna Lite Co.
Ldnal Co.
Fischer & Porter
Fish-Schurman
Glass Specialty
Hornig, August W.
Inlaid Optical
Marsco Mfg. Co.
New Haven Clock
Regal Instr. Co.
Rohm & Haas
Valley National Co.
Zenith Optical Lab.

GLASS TEST INSTRUMENTS, including Hardness, Immersion Liquids, Refraction, Strain, etc. (see also Refractometers)

Amer. Optical Co.
Baird-Atomic
Bausch & Lomb
Cargille, R. P.
Chapman Labs.
Edin Electronics
Epic, Inc.
Ercona Corp.
Fecker, Inc.
Fish-Schurman
Gaertner Scientific
GE
Hathaway Instr. Co.
Instrumentation Assoc.
Instrument Devel. Labs.
Kollmorgen Optical
Magnaflux Corp.
Meyer Opticraft
Minneapolis-Honeywell,
  Boston Div.
Microchemical Service
Northrop Anaheim
Olsen Testing Mach.
Penn Optical & Instr.
Pfaltz & Bauer
Phoenix Prec. Instr.
Plummer & Kershaw
Prec. Glass Prods.
Polarizing Instr. Co.
Precision Scientific
QOS Corp.
Robertshaw-Fulton
Rudolph & Sons
Shasta Div.
Sheffield Corp.
Taber Inst. Corp.
Teichert Engrg. Co.
Testing Machines, Inc.
Thwing-Albert
Zeiss, Inc., Carl

GLASS TO METAL SEALS, see Terminals, Hermetic

GLASS TUBING, Heat Resisting

Ace Glass
Bache & Company, Semon
Brand and Co.,
Bush Assocs.
Corning Glass Works
Crystal Glass Tube & Cyl.
Greiner Glassblowing Lab.
Fischer & Porter Co.
Fish-Schurman
Friedrich & Dimmock
Greiner Glassblowing Lab.
Helio Instr. Co.
Jacoby-Tarbox
Jerguson Gage
Kimble Glass Co.
Kontes Glass
Martin & Co.
Owens Illinois Glass
Phoenix Prec. Instr.
Porter, George K
Smith Co., Arthur F.
Thermal American Fused
Thermal Syndicates, Ltd.
Trimount Instr. Co.
Uehling Instr. Co.
Uhrig Co., Joseph F.
Wilmad Glass Co.

GLASS TUBING, Precision Bore

Ace Glass Inc.
Alfa Photo Corp.
Aristo Grid Lamp Prods.
Bache & Company, Semon
Brooks Rotameter
Corning Glass Works
Crystal Glass Tube & Cyl.
Dunbar Glass Corp.
Edna Lite Co.
Eisele & Co.
Everett Products
Fischer & Porter Co.
Fish-Schurman
Fredericks Co., Geo.
GE, Lamp Dept.
Greiner Glassblowing Lab.
Gurley, W. & L. E.
Harshaw Chemical
Ideal-Aerosmith
Kontes Glass
Martin & Co.
Mercury Glass Co.
Owens-Illinois
Pan-technics, Ltd.
Phoenix Prec. Instr.
Podbielniak, Inc.
Porter, George K.
Prec. Glass Prods.
Radiation Counter Labs.
Sampson Chem.
Scientific Glass App.
Smith Co., Arthur F.
Stupakoff Div.
Teichert Engrg. Co.
Torrance Glass & Color
Wilmad Glass Co.

GLASS TUBING, Ultraviolet Transmitting, including Opaque to Visible Lighting

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Continental Electric
Cooper-Hewitt
Corning Glass Works
Fish-Schurman
Gates & Co.
GE
Greiner Glassblowing Lab.
Hanovia Chem. & Mfg.
Helio Instr. Co.
Penberthy Injector
Phoenix Prec. Instr.
Prec. Glass Prods.
Quartz Products Corp.
Sampson Chem. & Pigment
Thermal American Fused
Thermal Syndicates, Ltd.
Ultra-Violet Products
Wilmad Glass Co.

GLASS WORKING EQUIPMENT including Blowing, Cutting, etc.

Ace Glass Inc.
Alpha American Corp.
Baltimore Instr.
Bethlehem App. Co.
Bush Assocs.
Croname, Inc.
Crystal Glass Tube & Cyl.
Fisher Scientific
Fuess, Inc., R.
Glass Engrg. Labs.
Glass Insts., Inc.
Griebel Co.
Greiner Co. Emil
Greiner Glassblowing Lab.
Haydu Brothers
Instrumentation Assoc.
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Scientific Instr. Co.
Teichert Engrg. Co.
Torrance Glass Color
Uhrig Co., Joseph F.
Wakefield Industries
Zenith Optical Co.

GLASSES, Cover

Amer. Optical Co.
Apex Optical Corp.
Apex Specialties
Bache & Company, Semon
Bausch & Lomb Optical
Behm & Sons
Buhl Optical Co.
Cast Optics Corp.
Chicago Dial Co.
Corning Glass Works
Dearborn Glass Co.
Dearborn Scientific Co.
Eclipse Glass Co.
Edna Lite Co.
Esco Products
Fish-Schurman
Freed, J. Melvin
Gallien, R. P.
Glass Specialty
Grat-Apsco
Harrison & Harrison
Harshaw Chemical Co.
Inlaid Optical Corp.
Jones Optical Works
Kimble Glass Co.
Koehler Instr. Co.
Lancaster Glass
Lynn, Robert M.
Marsco Mfg. Co.
Master Optical Co.
Polan Industries
Popper & Klein
Precision Products
Regal Instr. Co.
Rohm & Haas
Simpson Optical Co.
Technical Soldering Co.
Valley Mfg. Co.
Zenith Optical Lab.

GLASSWARE, Laboratory, see Laboratory Apparatus

GLOSS METERS (see also Paint Test Instruments)

Amer. Instr. Co.
Bausch & Lomb
Central Scientific
Dearborn Scientific
Epic, Inc.
Ercona Corp.
Gaertner Scientific
Gardner Laboratory
Instrument Devel. Labs.
Kaye Devel. Labs.
Leitz Inc.
Pfaltz & Bauer
Photovolt Corp.
Sensitive Res. Instr.
Testing Machines, Inc.
Zeiss, Inc., Carl

GLOW TUBES, Voltage Regulators, see Voltage Regulators

GLUE TESTERS, see Adhesion

GOLD

Amer. Platinum Works
Amer. Silver Co.
Baker & Co.
Bishop & Co., J.
Brainin Co., C. S.
Cohn Corp., Sigmund
Fuess, Inc.
Gallien, R. P.
General Alloy Co., Inc.
General Plate Div.
Handy & Harman
Mallory & Co., P. R.
Ney Co., J. M.
Pancro Mirrors, Inc.
Peerless Roll Leaf Co.
Secon Metals Corp.
Sel-Rex Corp.
Sherman & Co.
Technic, Inc.
Wilson Co., H. A.

GOLD BEATER'S SKIN

Hastings & Co.

GONIOMETERS

Amer. Inst. Co.
Autom. Timing & Controls
Bendix Aviation Corp.
Berkeley Div.
Brinkmann Instruments
Dearborn Scientific
Dusenbery Co.
Eichner Instruments
Ercona Corp.
Ferner Co.
Fish-Schurman
Gaertner Scientific
Gardner Laboratory
GE X-Ray Corp.
Griswold Mfg. Co.
Hayes Scient. App.
Lab. Optical
Jarrell-Ash
Meyer Opticraft
Nilsen Mfg. Co.
North Amer. Philips
Opplem Co., Inc.
Oster Mfg. Co., John
Perkin-Elmer
Photogrametry Inc.
Radio City Prod. Co.
RCA Div.
Reiner Electronics Co.
Rudolph & Sons, O. C.
Scient. Inst. Dev. Lab.
Servo Corp. of Amer.
Stocker & Yale
Stratex Instr. Co.
Testing Machines, Inc.
Wild Heerbrugg
Zeiss, Inc., Carl

GOVERNORS, see Object of Control

GOVERNORS, Air, see pressure Regulators, Air

GOVERNORS, District, see Gas Distribution System Instruments

GOVERNORS, Engine, see Engine Governors

GOVERNORS, Escapement Controlled, see Clockworks

GOVERNORS, Gas, see Gas Distribution System Instruments, also Pressure Controllers

GOVERNORS, Pump, see Pump Governors

GOVERNORS, Station, see Electric Power Generation Instruments

GOVERNORS, Steam, see Engine Governors

GOVERNORS, Turbine, see Engine Governors

GRADUATING MACHINES, see Dividing Machines

GRAIN TEST INSTRUMENTS

Brabender Corp.
Burrows Equipt.
Central Scientific
Cuthbert Co.
Exact Weight Scale
Grain Lab. Equipt. Co.
Menlo Research Lab.
Moist-O-Meter, Inc.
Moisture Register Co.
Newark Scale Works
Precision Scientific
Schlumberger Well
Scient. Inst. Dev. Lab.
Seedburo Equipt Co.
Tell-Tronics Prod., Inc.
Toledo Scale Co.
Troemner, Henry
Weston Electcl. Instr.

GRANULAR MATERIALS, Level, see Level

GRANULAR MATERIALS MEASUREMENTS, see Particle Instruments

GRANULAR MATERIALS FLOW, see Flow Instruments, Granular Material

GRAPHIC CIRCUITS, see Circuits, Graphic

GRAPHIC PANELS, see Panels, Graphic

GRAPHITE, Colloidal

Acheson Colloids
Dow Chemical
Newall Mfg. Co.

GRATING, Diffraction

Applied Research Labs.
Baird-Atomic
Bausch & Lomb
Central Scientific
Coleman Instruments
Davidson Mfg.
Dearborn Scientific
Dietert Co.
Diffraction Prods.
Farrand Optical
Fish-Schurman
Gaertner Scientific
G. M. Mfg. Co.
Gurley, W. & L. E.
Helio Instr. Co.
Jarrell-Ash
Laboratory Specialties
Perkin-Elmer
Unertl Optical
Welch Mfg. Co., W. M.

GRATING, Echelon

Baird-Atomic
Bausch & Lomb
Farrand Optical
Fish-Schurman
Gaertner-Scientific
Helio Instr. Co.
Jarrell-Ash Co.
Lab. Optical
Palos Optical

GRAVIMETERS, see Geophysical Instruments

GRAVITOMETERS, see Specific Gravity

GRAVITY, see Geophysical or Specific Gravity

GREASE TESTING INSTRUMENTS

Alpha Corp.
Alpha Molykote
Amer. Instr. Co.
American Res. Corp.
Apex Scient.
Brabender Corp.
Burrell Corp.
Central Scientific
Devtronics, Inc.
Engineering Res. & Devel.
Erdco Engrg. Co.
Fish-Schurman Co.
Fisher Scientific Co.
GE
Greiner, Emil
Humboldt Mfg. Co.
Koehler Instr. Co.
Labline Inc.
LaPine Corp.
Precision Scientific Co.
Technical Equipt. Co.
Televiso Co.
U. S. Testing Co.
Weston Electcl. Instr.

GRINDERS, Contour, see Machines, Contour Grinding

GRINDERS, Precision Surface, see Machines, Surface Grinding

GRINDING FINISH GAGES, see Dimensional Gages

GROUND DETECTORS (see also Resistance)

Assoc. Research, Inc.
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Dit-Mco, Inc.
Eastern Specialty
Electro-Tech Equip.
Esterline-Angus
Excel Elect. Service Co.
GE, Apparatus Sales
Georator Corp.
Gray Instr. Co.
Heiland Div.
Industrial Insts., Inc.
Instrument Labs.
Kahn & Co.
Leeds & Northrup
Miller, M. C.
Minneapolis-Honeywell, Boston Div.
Nelson Electric Mfg.
Niagara Electric
Parr Mfg. Corp.
Penn Optical & Instr.
Peschel Electronics
Roller-Smith
Sensitive Res. Instr.
Shallcross Mfg.
Sherron Metallic
Sticht & Co., Herman H.
Sunshine Scientific
Thwing-Albert
United Optical
Westinghouse Electric
Wheelock Signals, Inc.
Winslow Co.
Zenith Electric

GROUND RESISTANCE INSTRUMENTS, see Resistance, Ground

GUIDES, Sapphire Filament Coiling

Bird & Co.
Elgin National Watch
Gatti, Aurele M.
Industrial Jewel Brg.
Kastner, Charles
Keller & Co.
Linde Co.
Powers, George
Steel Co.
Swiss Amer. Jewel Bear.
Swiss Jewel Co.
Vallorbs Jewel Co.
Waltham Precision Tool
Worley Jewel Co.

GUIDES, Wire and Thread

Bird & Co.
Centralab Div.
Corning Glass Works
Crafts Co.
Dusenberry Co.
Elgin National Watch
Gatti, Inc., M.
GE Metall. Prods. Dept.
Keller & Co.
Steatite Div.
Stupakoff Div.
Superior Steatite Div.
Tinnerman Products
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Worley Jewel Co.

GUMMED TAPE TESTING MACHINES, see Paper Testing Machines

GYRO COMPASSES, see Compasses, Gyro

GYRO PILOT, see Aircraft Instruments

GYRO STABILIZERS

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Avion Div.
Bendix, Eclipse-Pioneer
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Daystrom Instrument
Daystrom-Pacific
Ford Instr. Co.
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Gyromechanisms, Inc.
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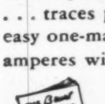

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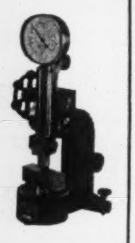

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Rea Company
Reeves Instr. Co.
Sterling Prc., Inst. Div.
Summers Gyroscope

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Autonetics Div.
Avion Div.
Bendix, Eclipse-Pioneer
Cedar Engrg., Inc.
Control Engrg. Co.
Daystrom-Pacific
Engineering Res. Assocs.
Epic Inc.
Federal Products
Ford Instr. Co.
GE, Apparatus Sales
Giannin, Co.
Globe Industries, Inc.
Greenleef Mfg.
Gyromechanisms, Inc.
Gyroscopes, Inc.
Humboldt Mfg. Co.
Humphrey, Inc.
Hycon Electronics
Impact Register Co.
Instrument Assocs.
Instrument Devel. Labs.
Iron Fireman Electronics
Kearfott Co., Western Div.
Kearfott Co., Inc.
Lear Inc.
Maxson Corp.
Minneapolis-Honeywell,
  Boston Div.
Norden-Ketay
Pacific Scientific
Reeves Instr. Corp.
Sanders Associates
Sperry Gyroscope
Sterling Prec. Instr.
Summers Gyroscope
Ten Bosch Inc.
U S. Time Corp.
Vectron, Inc.
Whittaker Gyro Div.

HAIRSPRINGS, see Springs

HANDLES, Instrument

Ace Plastic Co.
Aerolite Electronics
Allen, Chas. I.
Amer. Hard Rubber Co.
Bud Radio, Inc.
Cambridge Thermionic
Chicago Molded Prods.
Consolidated Mld. Prods.
Dimco-Gray
Dixon, Inc.
Erie Resistor
Erwood, Inc.
GE, Plastics Dept.
Goe Engrg. Co.
Gordon Co., Claud S.
Grammes Co.
Grigoleit Co.
Grobet File Co.
Imperial Molded Prods.
Insuline Corp.
Lewyt Metal Prods.
Luzerne Rubber Co.
Millen Mfg. Co.
Miller Mfg. Co.
Modern Tech. Supply
Molded Insulation Co.
National Co.
Radio Frequency Labs.
Raytheon Mfg. Co.
Richardson Co.
Rogan Bros.
Scheidl Mfg. Co.
Strombeck-Becker Co.
U. S. Engineering Co.
Virginia Electronics
Waterbury Mfg. Co.
Watertown Mfg. Co.

HARDNESS INDICATORS for Plastic Films, see Plastic Test Instruments

HARDNESS PENETRATORS, Diamond

Amer. Optical
Clark Instrument
Crafts Co.
Dessau, Maurice S.
Eitzen Co., Louis C.
Ercona Corp.
Ferner Co., R. Y.
Gatti, Aurele M.
Gilmore & Co.
Gordon Co., Claud S.
Hirschmann Co., Carl
Kent Cliff Labs. Div.
Opplem Co.
Powers, George
Precision Diamond Tool
Shore Instr. & Mfg. Co.
Testing Machines, Inc.
Torsion Balance Co.
Willey's Carbide Tool
Wilson Mech. Instr. Div.

HARDNESS TESTING MACHINES, Including Brinell

American Optical
Ames Precision Mach.
Ann Arbor Instr. Wks.
Arlin Products, Inc.
Barber-Colman
Baldwin-Lima-Hamilton
Brabender Corp.
Bush Assocs.
Clark Instr. Inc.
ConRay Corp.
Design & Develp. Labs.
Detroit Testing Mach.
Dice Co.
Dietert Co.
DoAll Co.
Eberbach & Son
Eitzen Co., Louis C.
Ferner Co.
Fisher Scientific
Gardner Lab.
GE
Gogan Machine
Gordon Co., Claud S.
Gordon Enterprises
Hacker & Co.
Hirschmann Co., Carl
Hygrotester, Inc.
Kent Cliff Labs.
King Tester Corp.
Koehler Instr. Co.
Leitz, Inc.
Magnaflux Corp.
Magnetic Analysis Corp.
Miller Instruments
Newage Industries
Olsen Testing Machine
Opplem Co.
Opto-Metric Tools
Pacific Scientific
Pacific Transducer Corp.
Pittsburgh Instr. & Mach.
Precise Prods. Co.
Precision Scientific
Reiner Electronics
Riehle Div.
Rowe Engrg. Co.
Rubicon Co.
Scherr Co.
Sheffield Corp.
Shore Instr. & Mfg. Co.
Steel City Testing Machs.
Swedish Gage
Taber Instr. Co.
Tennant Sons & Co.
Testing Machines, Inc.
Topflight Tape Co.
Torsion Balance Co.
Webster Instr. Inc.
Wilson Mech. Instr.
Zeiss, Inc., Carl

HARDWARE, Instrument and Electronic Equipment, Including Chassis, Handles, Hinges, Keys, Knobs, Legs, Locks

Abalon Prec. Mfg.
Ace Plastic Co.
Aeorlite Electronics
Aircraft Radio Corp.
Ampco Mfg. Co.
Apex Optical
Black & Decker
Bud Radio
Cambridge Thermionic
Circon Component
Churchill Lighting
Colortone Electronics
Corbin Cabinet Lock Co.
Dahl Co.
Dimco-Gray
Dixon Inc.
DuMont Labs., Allen
Eby, Inc., Hugh H.
Engineered Prods.
Erwood, Inc.
Farnsworth Electronics
Federal Screw Prods.
Ferner Co.
Gadgets, Inc.
General Cement Mfg.
Genisco Inc.
Goe Engrg.
Grammes Co.
Grigoleit Co.
Hartford Mach. Screw
Hopkins Engrg.
Instr. Components
Insuline Corp.
Johnson Co., E. F.
Laboratory Equipt. Co.
Lerco Electronics
Lessellis & Assocs.
Lewyt Metal Prods.
Malco Tool & Mfg.
Mallory Co., P. R.
Mico Instr. Co.
Millen Mfg. Co.
Miller-Robinson
Modern Tech. Supply
Mueller Electric
National Co.
Newark Electric Co.
Newall Mfg. Co.
Ostby & Barton
Palnut Co.
Remington-Rand Univac
Remler Co.
Rogan Co.
Sangamo Electric
Scheidl Mfg. Co.
Scoville Mfg. Co.
Smith, Inc., Herman H.
Sphinx American Co.
Stanley Wks.
Sterling Prec. Corp.
Stimpson Co.
Stromberg-Carlson
Stronghold Screw Prods.
Swishomatic Prods.
Telecomputing Corp.
Times Facsimile Corp.
Torrington Co.
Ultrasonic Corp.
U. S. Engrg. Co.
Vallorbs Jewel Co.
Vector Electronic Co.
Virginia Electronics
Voland & Sons, Inc.
Waldom Electronics
Whitehead Stamping Co.
Wolfe & Mann

HARMONIC ANALYZERS, see Spectrum Analyzers

HEADPHONES and HEADSETS

Ampco Mfg. Co.
Autom. Elect. Sales Corp.
Brush Electronics
Consolidated Avionics
Dyna-Empire
Elgin Natl. Watch Co.
Intelex Systems
Kellogg Switchboard
Newark Electric Co.
North Electric
Shure Brothers, Inc.
Superex Electronics
Stromberg-Carlson
Tech. Material Corp.
Telex, Inc.
U. S. Instr. Corp.
Winslow Co., Inc.

HEADS, Rupture, see Pressure Relief

HEADS, Recording, see Recording Heads

HEAT FLOW, Instruments and Transducers

Barber-Colman
Beckman & Whitley
Bristol Co.
Eastern Precision Resistor
Hagan Chem. & Controls
National Instr. Labs.
Robertson & Ruth
Ruge Assocs.
United Mfg. Co. Div.
Victory Engrg. Corp.

HEATING ELEMENTS

Baker & Co.
Blue M Electric
Clarostat Mfg. Co.
Cleveland Process Co.
Corning Glass Works
Cutler-Hammer
Electric Hotpack
Electro-Flex Heat
Electro-Tech Equip.
GE, Apparatus Sales
Gordon Co., Claud S.
Hevi-Duty Electric
Hexacon Electric
Huppert Co.
Kanthal Corp.
Mech. Indust. Prods.
Modern Lab. Equip. Co.
Morganite, Inc.
Nelson Electric Mfg.
Ribble Engrg. Co.
States Co.
Still-Man Equipt. Corp.
Syntron Company
Temp. Engrg. Corp.
Thermel, Inc.
Torrington Co.
Tuttle & Kift, Inc.
Ulanet Co.
Ungar Elect. Tools, Inc.
Wabash Metal Prod.
Watlow Elect. Mfg.
Westinghouse Electric
Wiegand Co.

HEATING ELEMENTS, Flexible, including Seilcables

Amer. Instr. Co.
Electric Hotpack
Electro-Flex Heat
LaPine & Co.
Lewis Engrg. Co.
Wiegand Co.

HEATING ELEMENTS, Furnace

Blue M Electric Co.
Cleveland Process Co.
Electric Hotpack Co.
Electro-Tech Equip.
GE, Apparatus Sales
Hevi-Duty Electric
Huppert Co.
Kanthal Corp.
Lucifer Furnaces
Research Appliance Co.
Unertl Optical Co., John
Temp. Engrg. Corp.
Thermel, Inc.
Tuttle & Kift, Inc.
Westinghouse Electric

HELIOSTATS

Fecker, Inc. J. W.
Gaertner Scientific
Instruments Corp.
Palos Optical
Unertl Optical

HERMETIC SEALS, see Terminals, Hermetic

HERMETIC SEALS, including Connectors, Headers, and Terminals

Amphenol Electronics
Ceramaseal Co.
Constantin & Co., L. L.
Cooper-Hewitt Elec.
Deutsch Co.
Hermaseal Co.
Kearfott Co.
Seals, Ltd.
Sealtron Corp.
Steatite Div. Amer. Lava
Stupakoff Div.
Technical Soldering
Thermo Materials
Torwico Electronics
U. S. Components
U. S. Gasket Co.
U. S. Stoneware
Winchester Electronics

HIGH ALTITUDE TEST and CALIBRATION CHAMBERS, see Environmental Test Chambers

HIGH-FREQUENCY APPARATUS, including RF Heaters

Advance Electronics
Airborne Instruments
Allis-Chalmers
Amer. Electroneering
Amer. Electronic Labs.
Bendix Aviation Corp.
Berkeley Div.
Boonton Radio Corp.
Branson Insts.
Brush Electronics
Bryant Chucking Grinder
Burrell Corp.
Burroughs Corp.
Centralab Div.
Clough-Brengle
Collins Radio
Crystal Research Labs.
Datascan Inc.
Donner Scientific
Electronics Devel. Lab.
Electro Engrg. Products
Electro-Mechanical Research
Electro-Voice, Inc.
Empire Devices Inc.
Erdco Engrg. Inc.
Federal Telephone & Radio
Ferris Instr. Corp.
Fisher Scientific
Fusion Engineering
G E, Apparatus Sales
General Radio
Hewlett-Packard
Hycon Electronics
International Resistance
Kahn & Co.
Kanthal Corp.
Kay Electric Co.
Kearfott Co.
Laboratory Equipt. Co.
Lavoie Labs.
Lear, Inc.
Lepel High Freq. Labs.
Marconi Instruments
Marion Electcl. Instr.
M. B. Mfg. Co.
McFarlin Co.
Measurements Corp.
Miller Robinson
Minnesota Electronics
Mohawk Electronics
National Co., Inc.
New London Instr. Co.
Orban Co., Kurt
RCA Div.
Radio Receptor Co.
Raytheon Mfg. Co.
Sensitive Res. Instr.
Servo Corp. of America
Sheffield Corp.
Sherron Metallic
Sierra Electronic Corp.
Sperry Gyroscope
Sweets Co., Martin
Thordarson Elect. Mfg.
Vectron, Inc.
Walkirt Co.
West Coast Electronics
Westinghouse Electric

HOLDERS, Crystal, see Crystal Holders

HOOK GAGES

Bendix-Friez
Dwyer Mfg. Co.
Garlynn Engrg.Co.
Gurley W. & L. E.
Instruments Corp.
Leupold & Stevens
Lufkin Rule Co.
Meriam Instr. Co.
Premier Metal Etching Co.
Sheffield Corp.
Starrett Co., L. S.
Swedish Gage
Trimount Instr. Co.
White Co., Inc.

HORIZONS, Artificial, see Aircraft Instruments

HOSE, Metallic, Flexible, Seamless

Aeroquip Corp.
Amer. Brass Co.
Bendix, Eclipse-Pioneer
Breeze Corporations
Brockway Co.
Clifford Mfg. Co.
Cook Electric
Fischer Spring Co.
Flexonics Corp.
Packless Metal Prods.
Penna. Flexible Metallic
Pyle-National Co.
Seamlex Company, Inc,
Stewart Mfg. Corp.
Univ. Metal Hose Co.
Vibration Mountings, Inc.
Weatherhead Co.

HOSE, Rubber

Aeroquip Corp.
Anchor Coupling Co.
Canfield Rubber
Carlyle Rubber Co.
Dixon Inc.
Flexonics Corp.
Goodrich Co., B. F.
Goodyear Tire
Hamilton Rubber
Haydu Bros.
R. K. L. Valve & Mfg. Co.
Raybestos-Manhattan
Republic Rubber Div.
Resistoflex Corp.
Schrader's Son, A.
U. S. Rubber Co.
Vanton Pump & Equip.
Vibration Mountings, Inc.
Weatherhead Co.

HOT PLATES, Laboratory, see Laboratory Apparatus

HOUR COUNTERS, see Time, also Timers

HOUSINGS, see Panels

HUMIDIFIERS

Electric Hotpack Co.
Guardite, Co.
Johnson Service Co.
National Controls
Powers Reg. Co.

HUMIDISTATS

Barber-Colman
Bendix-Friez
Johnson Service Co.
Kahn & Co.
Minneapolis-Honeywell
National Controls
Parks-Cramer Co.
Photo-Crystals, Inc.
Physical Research
Powers Reg. Co.
Soreng Products
Taylor Instr. Cos.

HUMIDITY CABINETS, See Environmental Test Chambers.

HUMIDITY CONTROLLERS

Amer. Instr. Co.
Amer. Moistening Co.
Assembly Products
Atlas Valve Co.
Barber-Colman
Basic Controls, Inc.
Bendix-Friez
Brabender Corp.
Bristol Co.
Cramer Controls Corp.
Dietert Co.
Electric Eye Equipt. Co.
Electric Hotpack Co.
Fenwal, Inc.
Fielden Instr. Div.
Fischer & Porter Co.
Food Technology, Inc.
Foxboro Co.
Fuel Watchman
Garden City Instruments
General Controls Co.
Gotham Instr. Div.
H-B Instr. Co.
Hallikainen Instruments
Hygrotester Inc.
Illinois Testing Labs.
Instruments Corp.
Johnson Service Co.
Kahn & Co.
Leeds & Northrup
Mason-Neilan Div.
Mine Safety Appliance
Minneapolis-Honeywell
  Boston Div.
Moeller Instr. Co.
Moisture Register Co.
National Controls
Norcross Laboratories
Partlow Corp.
Penn. Insts. Div.
Phen-Trols, Inc.
Phila. Thermometer Co.
Physical Research Labs.
Powers Reg. Co.
Rochester Mfg. Co.
Sarco Co., Inc.
Scientific Instr. Co.
Scientific Instr. Devel.
Serdex, Inc.
Soreng Products
Surface Combustion Corp.
Taylor Instr. Cos.
Tenney Engrg. Co.
Thermo-Electric Co.
Thwing-Albert
Trerice Co., H. O.
United Elect. Controls
U. S. Gauge Div.
Valverde Labs.
Varo Mfg. Co.
Weksler Thermom. Corp.
Weston Electcl. Instr.
White-Rodgers
Zeiss, Inc. Carl

HUMIDITY-SENSITIVE MATERIALS

Bendix-Friez
Carbide & Carbon
Dow Chemical Co.
Garden City Instruments
Photo-Crystals, Inc.
Seegers Mfg. Co.
Trerice Co., H. O.

HUMIDITY INSTRUMENTS, Conductivimetric

Bendix-Friez
Bristol Co.
Chicago Indust. Instr.
Consol. Electrodynamics
Electric Hotpack Co.
Foxboro Co.
General Mills Inc.
Gow-Mac Instr. Co.
Industrial Instr. Inc.
Kahn & Co.
Leeds & Northrup
Marconi Instruments
Moeller Instr. Co.
National Controls
Photo Crystals, Inc.
Physical Reserach Labs.
Pimex Inc.
Serdex, Inc.
Testing Machines, Inc.
Trerice Co., H. O.

HUMIDITY INSTRUMENTS, Hygrometric

Amer. Instr. Co.
Amer. Thermo Ware
Anders Lykens Corp.
Barber-Colman
Beckman Div.
Bendix-Friez
Bristol Co.
Burton Mfg. Co.
Cambridge Inst. Co.
Central Scientific
Daystrom Instr. Div.
Draper Mfg. Co.
Driaire

Electron-Radar Prods.
Ess Instr. Co.
Ever Ready Thermometer
Fischer & Porter Co.
Foxboro Co.
GE
General Mills Inc.
Glogau & Co.
G. M. Mfg. Co.
Gordon Co., Claud S.
Gotham Instr. Div.
Green, Henry J.
Greiner, Emil
Griebel Co.
H-B Instr. Co.
Hiergesell & Sons
Huddleston, J. S. F.
Illinois Testing Labs.
Instruments Corp.
Johnson Service Co.
Kahl Scientific Instr.
Kahn & Co.
Leeds & Northrup
Lennard Co.
Manning, Maxwell & Moore
Mason-Neilan Div.
Mine Safety Appliances
Minneapolis-Honeywell
Moeller Instr. Co.
Palmer Thermometers, Inc.
Phila. Thermometer Co.
Photo-Crystals, Inc.
Physical Research Labs.
Pimex, Inc.
Powers Reg. Co.
Prec. Thermom. Instr.
Riecker Instr. Co.
Sargent & Co.
Scientific Instr. Co.
Seedburo Equipt. Co.
Seegers Mfg. Co.
Serdex, Inc.
Standard Thermometer, Inc.
Taylor Instr. Cos.
Testing Machines, Inc.
Transval Engrg. Corp.
Trerice Co.
Wagner & Son
Wallace & Tiernan
Welch Mfg. Co., W. M.
Weksler Thermom. Corp.
Weston Electcl. Instr.

HUMIDITY INSTRUMENTS, Hydroscopic, including Hair, Plastics, etc.

Amer. Instr. Co.
Anders Lykens Corp.
Barber-Colman
Bendix-Friez
Bristol Co.
Cambridge Intr. Co.
Fielden Instr. Div.
Foxboro Co.
Garden City Instruments
G. M. Mfg. Co.
Germanow-Simon Mach. Co.
Gotham Instr. Div.
Green, Henry J.
Hallikainen Instruments
Instruments Corp.
Johnson Service Co.
Kahl Scientific Instr.
Lennard Co., P. M.
Minneapolis-Honeywell
Moeller Instr. Co.
Parks-Cramer Co.
Photo-Crystals, Inc.
Powers Reg. Co.
Scientific Instr. Co.
Seegers Mfg. Co.
Serdex, Inc.
Taylor Instr. Cos.
Testing Machines, Inc.
Transval Engrg. Corp.
Victory Engrg. Corp.

HUMIDITY INSTRUMENTS, Psychrometric, Indicating

Accuracy Scientific Instr.
Amer. Instr. Co.
Amer. Moistening Co.
Bacharach Indust. Insts.
Beckman & Whitley
Bendix-Friez
Bristol Co.
Burton Mfg. Co.
Central Scientific
Chicago Apparatus Co.
Ever Ready Thermomter
Fielden Instr. Div.
Fischer & Porter Co.
Foxboro Co.
Garden City Instruments
Gotham Instr. Div.
Green, Henry J.
Greiner, Emil
H-B Instr. Co.
Henson Co.
Hiergesell & Sons
Hill & Co.
Instruments Corp.
Johnson Service Co.
Kahl Scientific Inst.
Lennard Co.
Mason-Neilan Div.
Mine Safety Appliances
Minneapolis-Honeywell
Moeller Instr. Co.
Palmer Thermometers, Inc.
Photo Crystals, Inc.
Pimex, Inc.
Powers Reg. Co.
Prec. Thermom. & Insts.
Radiation Counter Labs.
Sargent & Co.
Scientific Instr. Co.
Taylor Instr. Cos.
Testing Machines, Inc.
Trerice Co.
U. S. Gauge Div.
Warren-Knight
Weighing & Cont. Comps.
Weksler Thermom. Corp.
Welch Mfg. Co., W. M.
Williamson Devel. Co.

HUMIDITY INSTRUMENTS, Psychrometric, Recording

Bendix-Friez
Bristol Co.
Dickson Co.
Fielden Instr. Div.
Fischer & Porter Co.
Foxboro Co.
G. M. Mfg. Co.
Garden City Instruments
Instruments Corp.
Johnson Service Co.
Leeds & Northrup
Minneapolis-Honeywell
Moeller Instr. Co.
Palmer Thermometers, Inc.
Pimex, Inc.
Powers Reg. Co.
Scientific Instr. Co.
Taylor Instr. Cos.
Trerice Co.
U. S. Guage Div.
Weighing & Cont. Comps.
Weksler Thermom. Corp.
Welch Mfg. Co., W. M.
Weston Elect. Inst. Corp.

HYDROGEN-ION INSTRUMENTS, see pH

HYDROGENATION APPARATUS

Amer Instr. Co.
Autoclave Engrs.
Beckman Div.
Central Scientific
Distillation Products
Greiner Glassblowing Lab.
Kontes Glass
Parr Instr. Co.
Podbielniak, Inc.
Precision Scientific
Pressure Prods. Industries
R. K. L. Valve & Mfg.

HYDROLOGIC INSTRUMENTS, including Rain Gages

Amer. Instr. Co.
Bendix-Friez
Berkeley Div.
Bristol Co.
Central Scientific
Foxboro Co.
G. M. Mfg. Co.
Geotechnical Corp.
Gorrell & Gorrell
Green, Henry J.
Gurley, W. & L. E.
Hathaway Instr. Co.
Henson Co.
Instruments Corp.
Instruments, Inc.
Keuffel & Esser
Leupold & Stevens
Martin-Hubbard Corp.
Micro Instr. Co.
North Amer. Instr. Co.
Pacific Scientific
Prec. Thermom. & Insts.
Shasta Div.
Stewart, M. C.
Taylor Instr. Cos.
Uehling Instr. Co.
Virginia Electronics
Warren-Knight
White Co., Inc.

HYDROMETERS, Indicating and/or Recording

Ace Glass Inc.
Accuracy Scient. Instr.
Amer. Thermo Ware
Bailey Meter Co.
Bendix Aviation Corp.
Central Scientific
Eitzen Co., Louis Co.
Fischer & Porter Co.
Fisher Scientific
Fleischhauer & Son
Foxboro Co.
Garden City Instruments
General Scient. Equipt.
G. M. Mfg. Co.
Gotham Instr. Co.
Greiner Co., Emil
Griebel Co., E.
H-B Instr. Co.
Hallikainen Instr. Co.
Hiergesell & Sons
Hill & Co.
Ideal-Aerosmith, Inc.
Johnson Service Co.
Kahl Scient. Instr.
Kessler Co.
Kimble Glass
Leeds & Northrup
Martin & Co.
Mason-Neilan Div.
Moeller Instr. Co.
Nankervis Co.
Norcross Corp.
Nurnberg Thermom. Co.
Owens-Illinois
Phila. Thermometer Co.
Pimex, Inc.
Prec. Thermom. & Insts.
Rascher & Betzold
Refinery Supply
Ruttco Mfg. Co.
Scientific Glass App.
Scientific Instr. Co.
Taylor Instr. Cos.
Testing Machines, Inc.
Trerice Co.
Weksler Thermom. Corp.
Weston Electcl. Instr.

HYDROMETERS, Mud

Accuracy Scient. Instr.
Braun Corp.
Greiner Co., Emil
Griebel Co.
H-B Instr. Co.
Hiergesell & Sons
Kessler Co.
Moeller Instr. Co.
Testing Machines, Inc.
Wagner & Son

HYGROMETERS, see Humidity Instruments, Hygrometric

HYGROSTATS

Amer. Instr. Co.
Amer. Mach. & Foundry
Barber-Colman
Bendix-Friez
Central Scientific
Electron-Radar Prods.
Johnson Service Co.
Parks-Cramer Co.
Photo-Crystals, Inc.
Physical Research Labs.
Powers Reg. Co.
Taylor Instr. Cos.

HYGRO THERMOGRAPHS

Amer. Mach. & Foundry
Bendix-Friez
Bristol Co.
Central Scientific
Foxboro Co.
Garden City Instruments
Green, Henry J.
Instrumentation Assoc.
Instruments Corp.
Serdex, Inc.
Taylor Instr. Cos.
Testing Machines, Inc.
Weksler Thermometer

HYPSOMETERS

Bausch & Lomb
Bendix Aviation Corp.
Central Scientific
Federal Telephone & Radio
GE
G. M. Mfg. Co.
Kahl Scientific Instr.
Keuffel & Esser
Lufkin Rule Co.
Victory Engrg. Co.
Warren-Knight
Welch Mfg. Co., W. M.

ICE WARNING INDICATORS, see Aircraft Instruments

IGNITION LAG INDICATORS, see Engine Test

IGNITION VELOCITY METERS, see Engine Test

IGNITRONS, see Tubes, Ignitron

ILLUMINATION CONTROLLERS

Abrams Instr. Co.
Allen-Bradley
Amer. Kloeckner-Moeller
Askania Reg. Co.
Assembly Products
Automatic Elect. Mfg.
Autom. Switch Co.
Autotron Co.
Avion Div.
Basic Controls, Inc.
Betts & Betts
Bristol Co.
Cutler-Hammer
De-Tec-Tronic Labs.
Ebert Electronics
Electronic Control
Electronic Lab.
Electronics Corp. of Amer.
Fisher-Pierce
Flight Res., Inc.
G-M Labs.
General Controls
GE, Apparatus Sales
General Radio
Haledy Electronic Co.
Hermetic Sealing Corp.
Hupp Electronics
Indust. Contr. Panel Co.
Indust. Electronic Contr.
Lumenite Electronic
Magnetic Amplifiers
Magnetic Instr. Co.
Michigan Electronics
Micro Balancing, Inc.
Montgomery Mfg.
Paragon Electric
Phoenix Prec. Instr.
Rockwell Engrg. Co.
Soreng Products
Square D Co.
Superior Electric
Timely Instruments
Tork Clock
United Transf. Corp.
Vocaline Corp.
Ward Leonard
Weston Electcl. Instr.
Worner Electronic Devices
Zenith Electric

ILLUMINATION INSTRUMENTS, including Exposure Meters, Foot Candle Meters, Photometers, etc.

Alden Products
Alfax Paper & Eng.
American Instr. Co.
Agfa Ansco
Applied Research Labs.
Argus Cameras, Inc.
Basic Controls, Inc.
Beckman Div.
Bendix-Friez
Boone Instr.
Bradley Laboratories
Brinkmann Instruments
Bristol Co.
Brush Electronics
Cambridge Instr. Co.
Central Scientific
Coleman Instruments
DeJur-Amsco
Dearborn Scientific
Eichner Instruments
Electro-Physics Co.
Electro-Tech Equipt. Co.
Ercona Corp.
Esterline-Angus Co.
Farrand Optical
Fecker, Inc.
Fish-Schurman
Fisher Scientific
Fuess, Inc.
G-M Labs.
Gaertner Scientific
Gardner Lab.
GE, Apparatus Sales
General Radio
Haines Designed Prods.
Hall Sonic Engrg. Co.
Hellige, Inc.
Hickok Electcl. Instr.
Instrument Devel. Labs.
Instr. Dev. & Mfg. Corp.
Jarrell-Ash
Kaye Devel. Co.
Klett Mfg. Co.
Lab Optical
Leeds & Northrup
M. B. Mfg. Co.
Macbeth Corp.
Marion Electcl. Instr.
Mass Instruments
Meters, Inc.
Parr Instr. Co.
Pfaltz & Bauer
Phipps & Bird
Phoenix Prec. Instr.
Photo Res. Corp.
Photocon Res. Prods.
Photovolt Corp.
Photron Instr. Co.
Prec. Glass Prods.
Process & Instruments
QOS Corp.
Research Appliance Co.
Rockwell Engrg. Co.
Rubicon Co.
Rudolph & Sons
Specialties, Inc.
Sticht Co., Herman H.
Streeter-Amet
Sylvania Elec. Prods.
Triplett Electcl. Instr.
Weber Aircraft Corp.
Welch Mfg. Co., W. M.
Weston Electcl Instr.
Wollensak Optical
Zeiss, Inc., Carl
Zoomar Corp.

ILLUMINOMETERS, Macbeth

Bendix-Friez
Leeds & Northrup
Macbeth Corp.

IMMERSION LIQUIDS for Inspection of Glass, see Glass Test

IMPACT RECORDERS

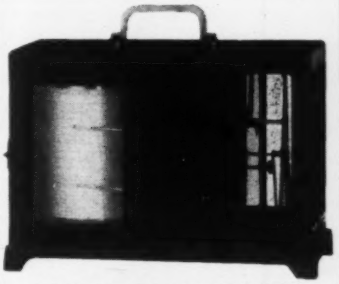
Alden Products
Allegany Instr. Co.
Analysis Sales Co.
Baldwin-Lima-Hamilton
Brush Electronics
Epic, Inc.
Gilmore Industries
Gorrell & Gorrell
Hathaway Instr. Co.
Impact Register Co.
Impact-O-Graph
Maxson Instr. Div.
M. B. Mfg. Co.
Ram Meter, Inc.
Testing Machines, Inc
Thwing-Albert

IMPACT TESTING MACHINES, including Pendulum Type

Associated Testing Labs.
Baldwin-Lima-Hamilton
Chatillon & Sons
Gardner Lab.
Impact Register Co.
Impact-O-Graph Corp.
L.A.B. Corp.
Maxson Instr. Div.
Riehle Testing Mach. Div.
Scott Testers, Inc.
Testing Machines, Inc.
Thwing-Albert Instr. Co.
U. S. Testing Co.
Vibr. Measmt. Engrs.
WacLine, Inc.

IMPEDANCE MEASURING INSTRUMENTS, including Reactance Meters, Z-Angle Meters, etc.

Acton Labs.
Advance Electronics
Boonton Radio
Bristol Co.
Chesapeake Instr.
Clarke Instr. Corp.
Clegg Labs., Inc.
Cubic Corp.
Deltron, Inc.
DeMornay-Bonardi
Electro Measurements, Inc.
Electro Products Lab.
F-R Machine
Federal Telephone & Radio
Freed Transformer
GE
General Radio Co.
Hewlett-Packard
Gulton Industries
Hickok Elec. Instr.
Indust. Test Equipt. Co.
Kay Electric
Marconi Insts.
Muirhead Instrument
Narda Corp.
Orban Co., Kurt
Polytechnic Res. & Dev.
Premier Research Labs.
RCA Div.
Radio City Products



HYGRO-THERMOGRAPH

Two designs: Banjo spread of hairs and 5" clock. Multiple strand hairs and 3½" clock.

also available:

THERMOGRAPHS—Made in accordance with U.S. Weather Bureau. 3½" or 5" clock.

SELF-RECORDING HAIR HYGROMETERS—Weekly clock movement making record of humidity on 3½" chart from 0 to 100%.

established 1832

Henry J. Green

Henry J. Green Instruments, Inc.
1191 Bedford Ave., Brooklyn 16, N.Y.

For more information circle 159 on inquiry card.

When Using This Guide look under the variable, e.g., Pressure Gages (not Gages, Pressure); or look under the noun—Magnets, Permanent (not Permanent Magnets).

MEGOHMER
INSULATION TESTERS

GENERATOR TYPES

"MINOR" Dwarf Size, 3 lbs., 500 Volts DC, 50 megohms, Bulletin 450

"MAJOR" Small size constant pressure, 500 Volts DC, 50 megohms. Extra ohm scale. Bulletin 465

"STANDARD" Heavy duty constant pressure 500 or 1000 Volts DC. Ranges to 2000 megohms. Bulletin 455

BATTERY VIBRATOR TYPES

"MODEL B-7" Precision Ohmmeter-Megohmmeter. 2 megohm ranges, 2 ohm ranges, 2 test potentials. Bulletin 440

"MODEL B-6" 4 instruments in 1. Ranges: 200 megohms, 2000 ohms, AC & DC volts up to 600. Bulletin 441

PLUG-IN-TYPE

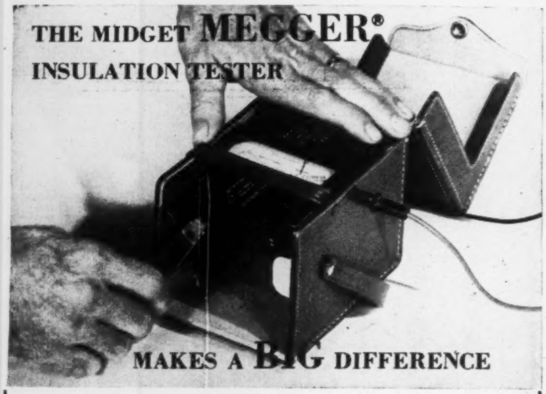
115 V. AC line Operated. **New Model P-1** Test Potential 500 V. DC or 1000 V. DC. Ranges: 0-100 or 0-1000 or 0-2000 Megohms. Bulletin 451

ELECTRONIC TYPE
20,000,000 Megohms

Model 29A with 11 ranges. Measures from 300,000 ohms to 20 million megohms. Test Potentials 85V DC and 500V DC. Bulletin 1029

HERMAN H. STICHT CO., INC. 27 PARK PLACE, NEW YORK 7, N. Y.

For more information circle **160** on inquiry card.



. . . IN MAINTENANCE PROBLEMS

The operating span of electrical equipment can be shortened considerably by accumulations of *dirt* and *moisture*.

Only by periodic insulation resistance measurements can you be sure of the condition of electrical insulation in your machines. Test with a dependable Megger Insulation Tester and keep records of each piece of equipment.

For Convenience and Protection, use the MIDGET "MEGGER" INSULATION TESTER. Write for **BULLETIN 21-85-I.**

B612

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET PHILADELPHIA 7 PA

For more information circle **161** on inquiry card.

Ramo-Wooldridge
Research Instr. Co.
Rubicon Co.
Sensitive Res. Instr.
Sierra Electronic
Southw. Indust. Electron.
Sun Electric Corp.
Technology Instruments
Telechrome, Inc.
United Mfg. Co.
WacLine, Inc.
Waters Mfg. Co.

IMPREGNATING MACHINES

High Vacuum Equipt. Corp.
Lammert & Mann
NRC Equipment
Red Point Prods.
Stokes Mach. Co.

INCLINOMETER TUBES

Ellison Draft Gage
Fish-Schurman
Helio Instr. Co.
Moeller Instr. Co.
Phoenix Prec. Instr.
Prec. Thermom. & Insts.
Trimount Instr. Co.

INCLINOMETERS, see Aircraft Instruments

INCLINOMETERS, Bore Hole

Edcliff Instruments
Sperry-Sun Well Surveying
Tech. Oil Tool Corp.

INCLINOMETERS, Lateral, Aviation, see Aircraft Instruments

INCLINOMETERS, Ship, see Marine Instruments

INDICATOR LIGHTS, see Pilot Lights

INDICATORS, see Object of Measurement

INDUCTANCE INDICATORS

Aerovox Corp.
Boonton Radio
Electronic Devel. Lab
Federal Telephone & Radio
Feiler Engrg. Co.
Freed Transf. Co.
GE
General Electronic
General Radio
Industrial Instruments
Industrial Test Equipt.
Leeds & Northrup
Marconi Instruments
Pacific Instr. Co.
Premier Research
Radio City Products
Rubicon Co.
Shallcross Mfg. Co.
Sickles Co.
Sierra Electronic Corp.
United Transformer Corp.
Waters Mfg.
Weston Electcl. Instr.

INDUCTANCE STANDARDS, see Standards, Inductance

INDUCTORS, Fixed (see also Coils, also Transformers)

Aerovox Corp.
Airpax Products
Atlantic Transf. Div.
Avion Div.
Boonton Radio
Burnell & Co.
Caddell-Burns Mfg.
Caledonia Elects. & Trans.
Calif. Magnetic Cont. Corp.
Cambridge Thermionic
Carol Electronics
Carad Corp.
Centronics Co.
Chicago Std. Transf. Corp.
Coast Coil Co.
Colin Campbell Corp.
Communication Access. Co.
Corning Glass Works
Del Electronics Co.
Dietz Design & Mfg.
Essex Electronics
Ferranti Electric
Freed Transf. Co.
Gates Radio Co.
General Radio
Gudeman Co.
International Resistance
Johnson Co., E. F.
Kellogg Switchboard
Lenkurt Electric
Magnetic Instr. Co.
Millen Mfg. Co.
NJE Corp.
Pacific Instr. Co.
Polyphase Instr.
Southw. Indust. Electron.
Std. Electrical Prods.
Sterling Transf. Corp.
Superex Electronics
Thermador Electcl. Mfg.
Torwico Electronics
Transformers, Inc.
Triad Transf. Corp.
Tri-Dex Electronics
United Transf. Corp.
U. S. Instr. Corp.
Wheeler Insul. Wire, Inc.

INDUCTORS, Variable, including Decade

Aero Electronics
Aerovox Corp.
Avion Div.
Burnell & Co.
Calif. Magnetic Cont. Corp.
Cambridge Thermionic
Carad Corp.
Centronics Co.
Coast Coil Co.
Corning Glass Works
Del Electronics Co.
Dietz Design & Mfg.
Essex
Freed Transf. Co.
Gates Radio Co.
General Radio
Gudeman Co.
Helipot Div.
Hycor Co., Inc.
Johnson Co., E. F.
Lenkurt Electric
Millen Mfg. Co.
Muirhead Instrument
Pacific Instr. Co.
Research Instr. Co.
Superex Electronics Corp.
Sylvania Elec. Prods.
Technical App. Builders
Triad Transf. Corp.
United Transf. Corp.
Vari-L Co., Inc.

INFORMATION SYSTEMS, see Data Processing Systems

INFRARED DETECTORS (see also Spectrometers)

Anton Electronics Labs.
Autron Engrg., Inc.
Avion Div.
Baird-Atomic
Barnes Engrg. Co.
Basic Controls, Inc.
Consol. Electrodynamics
De-Tec-Tronic Corp.
Edison, Inc., Thomas A.
Electronics Corp. of Amer.
Eppley Lab.
Farnsworth Electronics
Farrand Optical
Fuess, Inc.
Hillyer Instr.
Hycon Electronics
Jarrell-Ash
Kaye Devel. Co.
Librascope, Inc.
Mine Safety Appliances
Olympic Devel. Co.
Perkin-Elmer
Phoenix Prec. Instr.
Precise Measmts. Co.
Pyroferric Co.
QOS Corp.
Servo Corp. of Amer.
Servomechanisms, Inc.
Texas Insts., Inc.
Thompson Products
Tri-Tronics Co.
Warner & Swasey Res.
Welch Mfg. Co., W. M.

INFRARED SOURCES

Avion Div.
Baird-Atomic
Barnes Engrg. Co.
Basic Controls, Inc.
Edmund Scientific
Farnsworth Electronics
Jarrell-Ash
Kemlite Labs.
Librascope, Inc.
Norden-Ketay
Precise Measmts. Co.
Pyroferric Co.
Regal Instr. Co.
Servo Corp. of Amer.
Stupakoff Div.
Ultra Violet Prods.

INKS, Recording

Amer. Rec. Chart Co.
B-I-F Industries
Bristol Co.
Brush Electronics
Chart Production Co.
Crown Indust. Prods.
Defender Instr. & Reg.
Edin Co.
Esterline-Angus
Fawler-Brost
Foxboro Co.
GE, Apparatus Sales
Gordon Co., Claud S.
Hays Corp.
Instruments Corp.
Lawter Chemicals
Leeds & Northrup
Manning, Maxwell & Moore
Minneapolis-Honeywell, Indust. Div.
Moeller Instr. Co.
Nichols, Lyman
Phipps & Bird
Sanford, Inc.
Sound Apparatus Co.
Taylor Instr. Cos.
Technical Charts, Inc.
Thwing-Albert
Trerice Co.
Varian Assocs.
Weksler Thermom. Corp.
Westinghouse Electric
Weston Elect. Inst. Corp.

INSPECTION, Glass and Quartz, see Glass Test

INSPECTION DEVICES, Color, see Color

INSPECTION DEVICES, Dimensional (including Concentricity, Cylindricality, Diameter, Thickness, etc.) see Dimensional Gages

INSPECTION DEVICES, Electrical, see Circuit Testers, also Insulation Testers, also Resistance Indicators, etc.

INSPECTION DEVICES, Hardness, see Hardness Testers

INSPECTION DEVICES, Insulated Wire, see Insulation Testers

INSPECTION DEVICES, Optical Projection, see Dimensional Gages

INSPECTION DEVICES, Smoothness, see Dimensional Gages, Surface

INSPECTION DEVICES, Thickness, see Dimensional Gages, also Thickness Gages

INSPECTION EQUIPMENT, Welding, see Flaw Detectors

INSPECTION EQUIPMENT, Bore Hole, see Telescopes, Bore Inspection

INSPECTION EQUIPMENT, Nondestructive, see Flaw Detectors

INSPECTORS, MAGNETIC, see Flaw Detectors, Magnetic

INSTRUMENT CASES, see Cases

INSTRUMENT CLEANING MACHINES, see Cleaning Machines

INSTRUMENT COVERS, see Covers, also Cases

INSTRUMENT FUSES, see Fuses

INSTRUMENT HOUSINGS, see Panels

INSTRUMENT LUBRICANTS, see Lubricants

INSTRUMENT PACKAGING, see Cases

INSTRUMENT PIVOTS and BEARINGS, see Pivots

INSTRUMENT REPAIRING TOOLS, see Tools

INSTRUMENT TRANSFORMERS, see Transformers

INSTRUMENT TUBING and FITTINGS, see Tubing and Fittings

INSTRUMENT TUBING SUPPORTS, see Tubing Supports

INSULATION, Electrical

Acme Wire
Amer. Phenolic Corp.
Armstrong Cork
Auburn Mfg. Co.
Bakelite Div.
Balfor Industries
Bentley, Harris Mfg.
Biggs Co.
Brady Co., W. H.
Brand and Co.
Buchanan Elec. Prods.
Cast Optics
Continental-Diamond Fibre
Corning Glass Works
Dolph, John C.
Dow Corning
Du-Co Ceramics
Du Pont de Nemours
Durez Plastics & Chem.
Dynakon Corp.
Electro-Tech Products
Electronic Mechanics, Inc.
Emerson & Cuming
Federal Screw Prods.
Formica Co.
GE
Gordon Co., Claud S.
Hermetic Sealed Prods.
Insulation Mfrs. Corp.
Lapp Insulator
Mica Insulator
Microcircuits Co.
Minnesota Mining & Mfg.
Mycalex Corp. of Amer.
Natl. Varnished Prods.
Natl. Vulcanized Fibre
Polymer Corp.
Precision-Paper Tube
Resinite Dep., Borden Co.
Rex Corp.
Richardson Co.
Rogan Bros.
Sandee Mfg. Co.
Sauereisen Cement
Sequoia Wire
Silicones Div.
Spaulding Fibre Co.
Steatite Div.
Stupakoff Div.
Superior Steatite
Suprenant Mfg. Co.
Synthane Corp.
Textolite Dept.

Tri-Dex Electronics
U. S. Gasket Co.
U. S. Rubber
U. S. Stoneware Co.
Warren Wire
Wilmington Fibre
Zophar Mills, Inc.

INSULATION, Hard Rubber

Amer. Hard Rubber Co.
Goodrich Co.
Goodyear Tire
Luzerne Rubber
Republic Rubber Div.
U. S. Rubber

INSULATION, Thermal

Armstrong Cork
Auburn Mfg. Co.
Biggs Co.
Centralab Div.
Dow Corning
Electronic Mechanics, Inc
General Instr. Co.
Gordon Co., Claud S.
Hermetic Sealed Prods.
L-O-F Glass Fibers
Raybestos-Manhattan
Reynolds Cement Co.
Richardson Co.
Rubatex Div.
Sauereisen Cement
Spaulding Fibre Co.
Steatite Div.
Stupakoff Div.
Superior Steatite
Tennessee Eastman
U. S. Gasket Co.
Zophar Mills, Inc.

INSULATION RESISTANCE INDICATORS, see Resistance

INSULATION TESTERS (see also Resistance Indicators, Insulation)

Acme Electric
Aircraft Electronics
Antenna Research Lab.
Asch Equipt. Co.
Associated Research, Inc.
Automatic Electric
Berkshire Labs.
Beta Electric
Biddle Co., James G.
Boonton Radio Corp.
California Magnetic
Cal-Tronics Corp.
Clough-Brengle
Columbus Products
Communication Meas. Lab.
Comtor Co.
ConRay Corp.
Custom Scient. Insts.
Daven Co.
Davenport Mfg.
Del Electronics
Dice Co.
Dit-Mco, Inc.
Eastern Specialty
El Mec Labs.
Electric Hotpack
Electro Devices (St. Louis)
Electro-Mec Lab.
Electro-Tech. Equip.
Epic Inc.
Federal Products
Federal Telephone & Radio
Fielden Instr. Div.
Freed Transf. Co.
Fruengel, Inc.
GE, Apparatus Sales
General Instr. Co.
General Radio Co.
Geier & Bluhm
Hermetic Sealing Corp.
Hewlett-Packard
Hewson Co.
Hickok Electcl. Instr.
Ideal Industries, Inc.
Industrial Gauges Corp.
Industrial Insts., Inc.
Industrial Test Equipt.
Jack Scientific Co., Bill
Kahn & Co.
Keithley Insts., Inc.
Kellogg Switchboard
Knopp Inc.
Larson Instr. Co.
Leeds & Northrup
Manson Labs.
Minn.-Honeywell, Boston
Multi-Amp Corp.
National Pneumatic Co.
Niagara Electcl. Instr.
Opad Electric Co.
Panellit Corp.
Peschel Electronics
Pimex, Inc.
Precise Measmts. Co.
Radio City Products
Radio Frequency Labs.
Rawson Electcl. Instr.
Reon Resistor Corp.
Rubicon Co.
Scott Testers
Shallcross Mfg.
Sherron Metallic
Simpson Electric
Slaughter Co.
States Co.
Sticht Co., Herman H.
Superior Insts.
Testing Machines, Inc.
Thordarson-Meissner
United Optical
U. S. Testing Co., Inc.
Westinghouse Electric
Weston Electcl. Instr.
Winslow Co.

INSULATION TESTERS

- High Voltage AC Breakdown Testers —Types PA.
- Arc Resistance Testers Types ART-1, ART-2.
- Megohmmeters for Insulation Resistance-Type L Series.

Write for complete catalog

Industrial Instruments Inc.
89 Commerce Road Cedar Grove Essex County N J

For more information circle **162** on inquiry card.

INSULATORS, Ceramic, including Special Shapes

Amersil Co., Inc.
Armstrong Cork
Cambridge Thermionic
Centralab Div.
Champion Spark Plug
Dearborn Scientific
Du-Co Ceramics
Electronic Mechanics
Erie Resistor
Farnsworth Electronics
Fish-Schurman
Garde Mfg. Co.
Genl. Ceramics & Steatite
GE
Gordon Co., Claud S.
Internat. Prods. Corp.
Johnson Co., E. F.
Jones Optical Works
Kearfott Co.
Keller & Co., L. H.
Lapp Insulator
McDanel Refractory
Millen Mfg. Co.
Morganite, Inc.
Mycalex Corp. of Amer.
Saxonburg Ceramics
Steatite Div.
Steward Mfg.
Stupakoff Div.
Superior Steatite
Sweets Co., Martin
Thermo Materials, Inc.
U. S. Gasket Co.
U. S. Stoneware Co.

INSULATORS, Fused Quartz, see Quartz, Fused

INSULATORS, Thermocouple, see Thermocouple Insulators

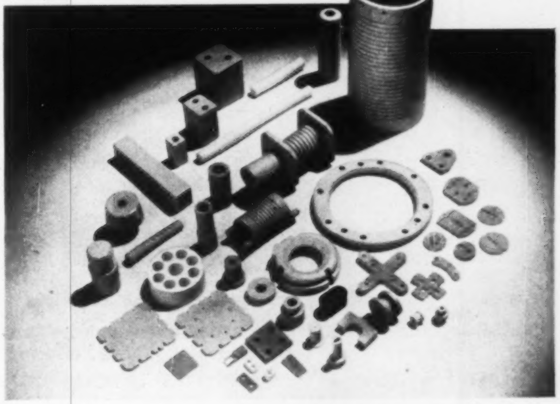
INTEGRATORS, Electrical and Electronic

Allegany Instr. Co.
Avion Div.
B-I-F Industries
Beattie-Coleman
Bell Aircraft Corp.
Bendix, Computer Div.
Bendix, Eclipse-Pioneer
Berkeley Div.
Bristol Co.
Consolidated Avionics
Donner Scientific
Electronic Tube Corp.
Farnsworth Electronics
Fed. Telephone & Radio
Fischer & Porter Co.
Foxboro Co.
Gyroscopes, Inc.
Hagan Chem. & Controls
Kearfott Co.
Librascope, Inc.
Manning, Maxwell & Moore
Medical Electronics Dev.
Mega Research, Inc.
Newton Co.
Penn Instrs. Div.
Philbrick Researches
Potter Instr. Co.
Reeves Instr. Corp.
Reflectone Corp.
Republic Flow Meters
Servo-Tek Prods. Co.
Southw. Indust. Electron.
Stewart Instr. Co.
Systron Corp.
Virginia Electronics
Wang Labs., Inc.
Wiancko Engrg. Co.

INTEGRATORS, Mechanical and Electromechanical (see also Planimeters, also Totalizers)

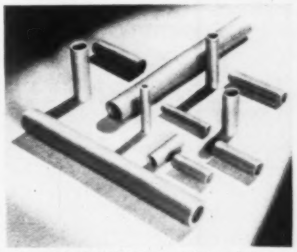
Allegany Instrument Co.
Amer. Meter Co.
Avion Div.
B-I-F Industries
Bailey Meter Co.
Barton Instr.
Beattie-Coleman
Bell Aircraft Corp.
Belock Instr.
Bendix, Eclipse-Pioneer
Bristol Co.
Bruning Co., Charles
Cedar Engrg., Inc.
Fischer & Porter Co.
Ford Instrument Co.
Foxboro Co.
Gap Instr. Co.
Giannini Datex Div.
Gyroscopes, Inc.
Hagan Chem. & Controls
Hays Corp.
Helipot Div.
Humphrey, Inc.
Insco Company
Instr. Devel. & Mfg.
Instron Engrg.
Kaiser Aircraft & Elect.
Kearfott Co.
Librascope, Inc.
Los Angeles Scient.
Newton Co.
Penn Instrs. Div.
Physics Res. Labs., Inc.
Reeves Instr. Corp.
Reflectone Corp.
Republic Flow Meters
Rockwell Mfg. Co.
Royson Engrg. Co.
Servonics, Inc.
Taylor Instr. Cos.
Transval Engrg. Corp.

STUPAKOFF
Precision Ceramic Parts
Hermetic Seals
Metallized Assemblies



CERAMIC PARTS

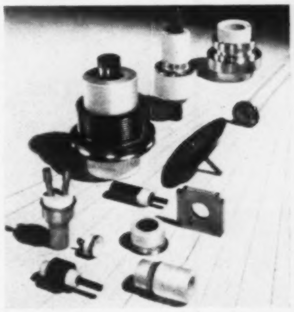
Stupakoff ceramic products are made by modern production methods of Alumina, Cordierite, Forsterite, Magnesia, Zircon, Stupalith® and Steatite—plain, ground, metallized or assembled. Stupakoff parts meet the most exacting tolerances and specifications.



CERAMIC TUBING—Available from stock, .015 to 5.125 in. O.D., .006 I.D. to 2.625 in. I.D., any length up to 15 inches.

HERMETIC SEALS

Kovar Glass Seals with single terminals having tubular, solid or flattened and punched center leads; high voltage terminals for feed-through applications; multi-header terminals for applications requiring a number of leads in limited area; stand-off terminals; strain relief terminals and Special Seals.



METALLIZED ASSEMBLIES

Combine a specially developed metal bond and rigidly controlled alumina to give a strong, durable, vacuum-tight product. Terminals are supplied with Stupakoff Metal Bond which significantly reduces assembly costs by withstanding prolonged exposure to soldering temperature.

STUPAKOFF DIVISION OF
The CARBORUNDUM Company
WRITE DEPT. IAHB LATROBE, PENNSYLVANIA

For more information circle **163** on inquiry card.

INTERFEROMETERS, see Dimensional Gages, Optical

INVERTERS, DC to AC

Airpax Prods. Co.
Amer. Television & Radio
Arnoux Corp.
Ballantine Labs.
Bendix, Eclipse-Pioneer
Bendix, Red Bank
Bogue Elect. Mfg.
Breeze Corporations
Brinkmann Instruments
Bristol Co.
Brunswick Instruments
Burroughs Corp.
C.G.S. Labs.
Carol Electronics
Carter Motor Co.
Cook Electric
Cornell-Dubilier
DuMont Labs., Allen B.
Dynamics Res. Assoc.
Eicor, Inc.
Electro Engrg. Prod. Co.
Electronic Assocs.
Electronic Measurements
El Ray Motor Co.
Empire Devices
Ford Instr. Co.
GE Apparatus Sales
Helipot Div.
Holtzer-Cabot
Impact Register Co.
Instr. Associates
Kellogg Switchboard
Lectronic Research Labs.
Leland Electric
Marconi Instruments
Minn.-Honeywell, Boston
Motordyne, Inc.
NJE Corp.
Nader Mfg. Co.
Perkin Engrg. Co.
Rheem Mfg. Co.
Robertshaw-Fulton
Sorensen & Co.
Summers Gyroscope
Transval Engrg. Corp.
Universal Transistor
Varo Mfg. Co., Inc.
Vibration Research Labs.
Walker Div.
Western Gear Corp.

ION EXCHANGE COLUMNS

Ace Glass
Barnstead Still & Ster. Co.
Bogue Elect. Mfg. Co.
Enley Products
Kontes Glass
La Motte Chem. Prod.
Penfield Mfg. Co.
Permutit Co.
Res. Specialties

ION EXCHANGE RESINS

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Bogue Elect. Mfg. Co.
Dow Chemical Co.
Enley Products
Fischer & Porter
Fisher Scientific
Infilco
Penfield Mfg. Co.
Permutit Co.
Res. Specialties

ION TRAPS

Clarostat Mfg. Co.
DuMont Labs., Allen

IONIZATION CHAMBERS for RADIOACTIVITY (see also Radioactivity)

Anton Electronics Labs.
Applied Physics Corp.
BJ Electronics
Baird-Atomic
Bendix, Cincinnati Div.
Brinkmann Instruments
Cambridge Instr. Co.
C.G.S. Labs.
Chatham Electronics Div.
Cook Electric
Curtiss-Wright
Detectolab, Inc.
Detectron Co.
Electronic Products Co.
El-Tronics, Inc.
Farnsworth Electronics
GE, Apparatus Sales
GE, X-Ray Dept.
Hallikainen Instruments
Henson Co., Fred C.
Instrument Tool & Engrg.
Instruments Inc.
Jordan Electronics
Landsverk Electrometer
NRD Instr. Co.
Nuclear Chicago
Nuclear Devel. Lab.
Nuclear Measmts. Corp.
Nuclear Science & Engrg.
Nucleonic Corp.
Ohmart Corp.
Radiation Counter Labs.
Radioactive Products, Inc.
R-C Scientific Instr.
Specl. Insts. Lab.
Technical Assocs.
Tracerlab, Inc.
United Engrs., Inc.
Victoreen Instr. Co.
Western Radiation Lab.
Wood Counter Lab.

IRON, Commercially Pure

Amer. Rolling Mill Co.
Baker Chem. Co.
Crucible Steel

IRON, Norway

Ferner Co.

ISOTOPES, Radioactive, see Radiactive Isotopes

JACKS, Coaxial, see Connectors

JACKS, Plug-in, see Connectors

JEWELERS' LATHES, Saws, etc.

Circular Tool Co., Inc.
Derbyshire, Inc.
Dessau Co.
Disston & Sons
Dixon, Inc.
Elgin Natl. Watch
Ferner Co.
Fineisen, A. R.
Gallien, R. P.
Grobet File Co.
Hirschmann Co.
Jadow Inc.
Kastner, Charles
Kendrick & Davis
Marshall Co.
Modern Tech. Supply
Newall Mfg.
Sickles & Sons
Sittler Corp.
Thomas & Skinner
Wakmann Watch Co.
Wilder, Inc.

JEWELS, Instrument

Aerolite Electronics
Allied Products Div.
Amer. Laubscher Corp.
Automatic Electric
Bache & Company, Semon
Bird & Co.
Borel & Co.
Braecher Co.
Dessau Co.
Drake Mfg. Co.
Eastern Specialty
Elgin Natl. Watch
Engis Equipt. Co.
Federal Screw Prods.
Ferner Co.
Gallien, R. P.
Gatti, Aurele M.
GE Apparatus Sales
Hamilton Watch
Imetra Co., Ltd.
Industrial Jewel Bear.
Instrument Prods. Corp.
Jadow Inc., B.
Johnson Co., E. F.
Kastner, Charles
Keller & Co.
King Gem Co.
Mallory & Co.
Marshall Co., P. R.
Modern Tech. Supply
Moser Jewel Co.
Newall Mfg. Co.
Powers, George
Preco Co.
Regal Instr. Co.
Steel Co.
Swiss Amer. Jewel-Bear.
Swiss Jewel Co.
Synthetic Gems & Jewels
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Weston Electcl. Instr.
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Automatic Electric
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Bird & Co.
Deknatel and Son
Drake Mfg.
Gallien, R. P.
GE, Apparatus Sales
Industrial Jewel Bear.
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Linde Co.
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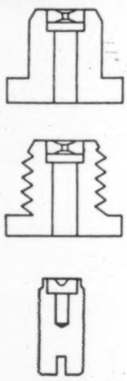

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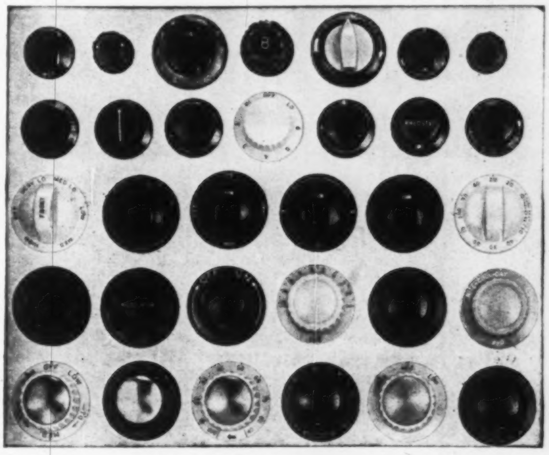

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Powers, George
Regal Instr. Co.
Vallorbs Jewel Co.

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Fisher Res. Lab.
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Goldak Co.
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Menlo Research Lab.
Mine Safety Appliances
Peerless Electric
Potter Aeornaut. Corp.
Precision Electronics, Inc.
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Aircraft Electronics
Amer. Electronics
Amer. Gas & Chemicals
Amer. Mach. & Foundry
Associated Research, Inc.
Beckman Div., Beckman
Bendix Aviation Corp.
Bullard Co.
Consol. Electrodynamics
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Darley & Co.
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Davis Instruments Div.
Daystrom Instrument
Distillation Products
Electro-Tech Equip.
Engelhard, Inc., Chas.
Erwood Co.
Fischer & Porter Co.
Fisher Res. Lab.
Gates & Co.
GE, Apparatus Sales
Gilmore, E. R.
Globe Phone Mfg.
Goldak Co.
Heiland Div.
Phoenix Prec. Inst.
Hill & Co.
Johnson-Williams
Kahl Scient. Instr.
Kahn & Co.
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Linde Co.
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Marsh Corp., Jas. P.
Menlo Res. Lab.
Meriam Instr. Co.
Mine Safety Appliances
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LENS MOUNTINGS, see Optical Parts

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Chicago Dial Ind. Co.
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Engis Equipt. Co.
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Ercona Corp.
Esco Prods. Co.
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Fuess, Inc.
Gaertner Scientific
Gordon Enterprises
Hall-Barkan
Instrument Devel. Labs.
Jadow, Inc.
Kollmorgen Optical
Lab. Optical
Los Angeles Scient. Instr.
Lynn, Robert M.
Merry Instr. Co.
Nikon, Inc.
Northrop Anaheim
Opplem Co.
Palos Optical
Penn Optical & Instr.
Perkin-Elmer
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Photogrammetry, Inc.
QOS Corp.
Robertshaw-Fulton
Testing Machines, Inc.
Tinsley Labs.
Unertl Optical
Zenith Optical Lab.
Zoomar Corp.

LENSES, Bullseyes, not optically ground (see also Glass, Raw)

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Automatic Electric
Bache & Company, Semon
Co-Optical Mfg.
Corning Glass Wks.
Dialight Corp.
Drake Mfg.
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Edna Lite Co.
Esco Prods. Co.
Felsenthal Sons
Fish-Schurman
Fuess, Inc.
General Scientific
Gordon Enterprises
Hayward Glass Co.
Heitz, Inc., Karl
Inlaid Optical
Internat. Optical
Johnson Co., E. F.
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Lancaster Glass
Lynn, Robert M.
Parisian Novelty Co.
Plummer & Kershaw
Precision Prods. Co.
Regal Instr. Co.
Richardson Co.
Signal Indicator Corp.
Simpson Optical
Swift & Anderson, Inc.
Torrance Glass & Color Works

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American Thermo-Ware
Apex Optical
Apex Specialties
Askania-Werke A. G.
Axler Associates
Bache & Company, Semon
Bausch & Lomb
Bray Optical
Bronoptics Co.
Buhl Optical
Burke & James
Cal-Astro Optical
Co-Optical Mfg.
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Eastman Kodak
Edmund Scientific
Edna Lite Co.
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Farrand Optical
Fecker, Inc.
Fish-Schurman
Gaertner Scientific
General Enterprises
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Heitz, Inc., Karl
Inlaid Optical
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Johnson Co., E. F.
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Perkin-Elmer
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Plummer & Kershaw
Practo Photo
Precision Prods., Inc.
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Simpson Optical
Tinsley Labs.
Unertl Optical
Univis Lens Co.
Wollensak Optical
Zenith Optical Co.
Zenith Optical Lab.
Zoomar Corp.

LENSES, Optical including Fused Quartz, see Optical Parts

LEVEL CONTROLLERS, Bin and Bulk Material

Askania Reg. Co.
Atom. Timing & Control
Automation Prods., Inc.
Autron Engrg., Inc.
Avion Div.
B-I-F Industries
Baldwin-Lima-Hamilton
Basic Controls, Inc.
Bendix, Cincinnati Div.
Bin-Dicator
Bristol Co.
Builders-Providence
Cleveland Fuel
Datascan Inc.
Daytronic Corp.
Deltron, Inc.
Electronic Prods. Co.
Excel. Elect. Service Co.
Fielden Instr. Div.
Fuller Co.
Gaydon Co.
General Controls
Gilmore Industries Inc.
Indust. Electronic Conts.
Instruments Inc.
Isotope Prods., Inc.
Jarco Services, Inc.
Jeffrey Mfg. Co.
Lumenite Electronic
Machinery Electrification
Merrick Scale
Nuclear Corp. of Amer.
Nuclear Research
Ohmart Corp.
Photobell Co.
R.K.L. Valve & Mfg. Co.
Richardson Scale Co.
Scrayco Mfg. Co.
Shallcross Controls
Synchro-Start Products
Techniflex Corp.
United Engineers, Inc.
Victory Engrg. Corp.
Viking Instruments
Worner Electronic Devices

LEVEL CONTROLLERS, Liquid (see also Valves, Float)

Aero Supply Mfg. Co.
Alco Valve Co.
Allen-Bradley
Alloy Bellows Engrg.
Amer. Chain & Cable
Amer. Electronic Mfg.
Amer. Meter Co.
Anton Electronics Lab.
Arca Regulators, Inc.
Askania Reg. Co.
Askania-Werke, A. G.

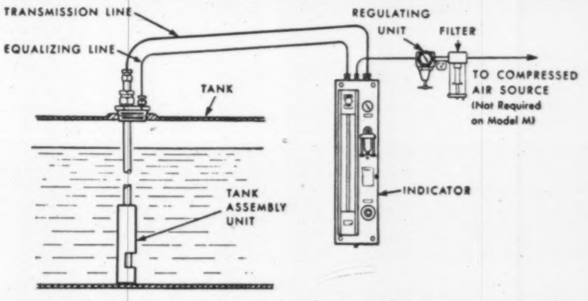
PETROMETER CORPORATION

43-22 Tenth St.
Long Island City 1, N. Y.
Tel—STillwell 4-8042

Petrometer SERIES 1400 *Remote Reading* LIQUID DEPTH GAUGES

For Accurate, Reliable Measurement of Depth of Liquid in Storage Tanks and Process Vessels. Operates on the principle of hydrostatic pressure... No moving parts... No electrical connections. Gives true reading of contents of tanks above or below the ground.

The Petrometer Industrial Indicating System consists of 5 basic parts: (1) The Indicator, (2) The Tank Assembly Unit, (3) A copper tube transmission line, (4) A copper equalizing line and (5) A manual or automatic source of compressed air for purging the transmission line.

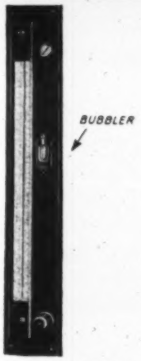


PETROMETER INDUSTRIAL INDICATING SYSTEM

FOUR *NEW* MODELS TO CHOOSE FROM . . .

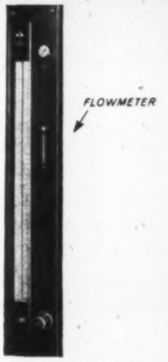
MODEL 1400 A

Equipped with aerator valve for semi-automatic indication.



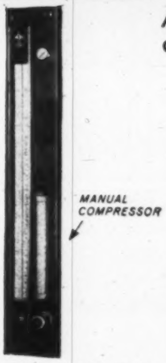
MODEL 1400 B

Equipped with bubbler to give visable evidence of continued aeration. Readings are automatic.



MODEL 1400 F

Equipped with flowmeter in lieu of bubbler.



MODEL 1400 M

Equipped with manual compressor for installations where there is no source of compressed air.

All 1400 Models are obtainable in 8 types for different tank depths.

All Petrometer Series 1400 Models, A, B, F and M have these design features:

(1) "Sealed In" Indicating Liquid. Cannot spill during transit.

(2) A one-piece extruded aluminum indicating unit with separate channels for scale and window.

(3) All functional parts are contained on the instrument panel — none on the mounting plate or as separate units.

(4) Easy Installation. Simply mount back cover on wall and plug the instrument panel into the female receptacles for quick-lock fastening.

Send For
Bulletin 6004A

HOW TO SELECT THE *Right* GAUGE . . .

KEY NUMBER	TYPE	INDICATING FLUID
1 to 64	442	RED-X
65 to 96	443	RED-X
97 to 120	444	RED-X
121 to 144	445	RED-X
145 to 164	446	RED-X
165 to 270	552	MERCURY
271 to 410	553	MERCURY
411 to 520	554	MERCURY
521 to 610	555	MERCURY

To determine the right type:

1. Multiply the vertical depth of the tank in inches by the Specific Gravity of the liquid. This result is the key number.
2. Using the key number select the correct type from the table.

To determine the right model:

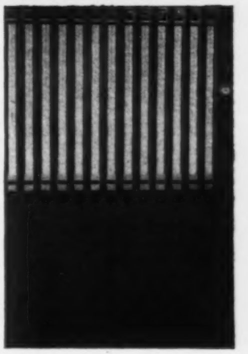
1. If compressed air is available select one of 3 models, A, B or F, described above.
2. If no compressed air is available use Model M. Tank assemblies available in brass, stainless steel, Monel, nickel, aluminum, lead, black iron, uscolite plastic. Transmission and Equalizer tubing available in multiples of 10 feet.

MULTI-GAUGE PANEL UNITS

Build Your Own Systems

Petrometer Series 1400 Indicators can be obtained in multiple units incorporated on a single panel and mounting plate to meet your specifications. Ideal for central control systems.

Petrometer Indicating Units, component parts can be purchased separately. Unique, easy-to-install design features of all components simplify panel construction. Ask for information.



For more information circle **171** on inquiry card.

LIQUID LEVEL and INDUSTRIAL CONTROLS

Positive! Dependable! Economical! No floats! No moving parts in liquid. Unaffected by acids, caustics, pressures or temperatures.
Induction relays, magnetic contactors and starters. Special control panels, enclosures. Contactors and starters. Special controls and panels.

5

WRITE FOR COMPLETE CATALOG

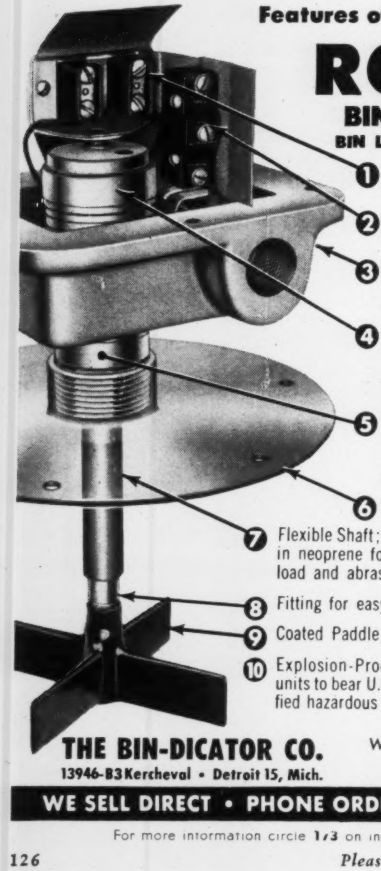
B/W CONTROLLER CORPORATION
2184 E. MAPLE ROAD BIRMINGHAM, MICH

FIRST IN THE FLOATLESS CONTROL FIELD

For more information circle **172** on inquiry card.

Features of the Improved

ROTO-BIN-DICATOR
BIN LEVEL INDICATOR



① H.D. Terminal Block; easy connections.
② Micro Switch for control circuit.
③ Dust-tight gray iron housing; std. or exp. proof.
④ Low Torque Motor supported on 2 bearing points for protection from vibration.
⑤ Precision Ground Drive Shaft; packed ball bearings for H.D. operation.
⑥ Mounting Plate 8" dia.
⑦ Flexible Shaft; heavy coil spring molded in neoprene for long life under heavy load and abrasion.
⑧ Fitting for easy shaft extension.
⑨ Coated Paddle resists abrasion.
⑩ Explosion-Proof Models; first and only units to bear U.L. Label for use in specified hazardous atmospheres.

THE BIN-DICATOR CO.
13946-B3 Kercheval • Detroit 15, Mich.

Write for Bulletin BD-8C.
or call
VAlley 2-6952

WE SELL DIRECT • PHONE ORDERS COLLECT

For more information circle 173 on inquiry card.

Assoc. Valve & Engrg.
Atlas Valve Co.
Atwood & Morrill
Autocall Co.
Automatic Control Co.
Autom. Timing & Control
Automation Prods., Inc.
Autron Engrg., Inc.
Aviation Engrg. Corp.
Avien, Inc.
B-I-F Industries
B. W. Controller
Bailey Meter Co.
Baldwin-Lima-Hamilton
Barber-Colman
Barton Instr. Corp.
Basic Controls, Inc.
Bastion-Blessing
Bendix, Cincinnati Div.
Bendix, Eclipse-Pioneer
Bendix-Friez
Bin-Dicator Co.
Black, Sivalls & Bryson
Boston Auto. Gage Co.
Boylston Co.
Bristol Co.
Brooks Rotameter
Builders Providence
Campbell Co.
Cash Co.
Clark Controller Co.
Climax Div.
Conoflow Corp.
Continental Foundry
Control Corp.
Controls Co. of America
Cook Electric
Cooper Co., Clark
Crescent Engrg. & Res.
Cutler-Hammer
Dahl & Co.
Datascan Inc.
Davis Reg. Co.
Daytronic Corp.
Deltron, Inc.
Devtronics, Inc.
DeZurik Shower Co.
Dietz Co., Henry G.
Dressen Barnes Corp.
Ebert Electronics
Eclipse Fuel Engrg.
Elect. Indicator Co.
Electro Devices (St. Louis)
Electron-Radar Prods.
Electronic Prods. Co.
Electronics Corp. of Amer.
Ellison Draft Gage
Excel Elect. Service Co.
Farris Engrg. Co.
Fenwal, Inc.
Ferrara, Inc.
Fielden Instr. Div.
Fischer & Porter Co.
Fisher Governor
Fisher-Pierce
Foster Engrg. Co.
Foxboro Co.
Frick Co.
Fuller Co.
Fulton Sylphon Div.
Furnas Electric
Gaydon Co.
Gems Co.
General Controls Co.
GE, Apparatus Sales
General Reg. Corp.
Gilmore Industries
Gorn Electric
Grove Valve & Reg.
Guardian Elect. Mfg.
Hagan Chem. & Controls
Haledy Electronics
Hammel-Dahl
Hays Corp.
Healy-Ruff
Henszey Co.
Indikon Co.
Industrial Control Panel
Industrial Elect. Controls
Indust. Electronics (Mass.)
Indust. Nucleonics
Infilco
Instruments Corp.
Instruments Inc.
Isotope Products, Inc.
Jarco Services, Inc.
Jerguson Gage & Valve
Jo-Bell Products
Johnson Corp.
Johnson Service Co.
Jordan Electronics
Kaye & MacDonald
Keckley Co.
Kieley & Mueller
Klipfel Valves
L. A. B. Corp.
Larson Instr. Co.
Leeds & Northrup
Leslie Co.
Leupold & Stevens
Liquidometer Corp.
Liquidivision Gauge & Con.
Lumenite Electronic
Machinery Electrification
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Manning, Maxwell & Moore
Marshalltown Mfg.
Mason-Neilan Div.
McAlear Mfg.
McDonnell & Miller
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Mercon Reg. Co.
Micromat Co.
Minneapolis-Honeywell
Moore Products
NRD Instrument Co.
Natural Gas Equipt. Co.
Norcross Corp.
Northern Equipt. Co.
Nuclear Corp. of Amer.
Nuclear Research
Ohmart Corp.
Oil Well Water Loc. Co.
Panellit, Inc.
Penn Insts. Div.
Petrometer Corp.
Phila. Pump & Machinery
Phoenix Prec. Instr.
Photobell Co.
Powers Reg. Co.
Precision Scientific
R. K. L. Valve & Mfg. Co.
R-S Products
Radioactive Prods., Inc.
Reliance Gauge Column
Republic Flow Meters
Research Controls
Revere Corp. of Amer.
Rochester Mfg. Co.
Rockwell Engrg. Co.
Sarco Co., Inc.
Scam Insts. Corp.
Schade Valve Mfg. Co.
Servo-Tek Prods. Co.
Shallcross Controls
Shand & Jurs
Simplex Valve & Meter Co.
Sparling Meter Co.
Spence Engrg. Co.
Square D Co.
Squires Co., C. E.
Swartwout Co.
Synchro-Start Products
Taylor Instr. Cos.
Technical Equipt. Co.
Techniflex Corp.
Tigerman Engrg. Co.
Topp Industries Inc.
Tracerlab, Inc.
Trimont Instr. Co.
Uehling Instr. Co.
Union Switch & Signal
United Control Corp.
United Electric Controls
United Engineers, Inc.
U. S. Gauge Div.
Vapor Recovery Systems Co.
Victory Engrg. Co.
Viking Instruments
Warren Engrg. Co.
Warrick Co.
Water Level Controls
Watts Reg. Co.
Weksler Thermom. Corp.
Weston Electcl. Instr.
Worner Electronic Devices
Yarnall-Warning

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Askania Reg. Co.
Automation Prods., Inc.
B-I-F Industries
Baldwin-Lima-Hamilton
Barton Instr. Corp.
Bendix, Cincinnati Div.
Bendix, Pacific
Bin-Dicator Co.
Bristol Co.
Builders-Providence
Deltron, Inc.
Dietert Co.
Elematic Equipt. Corp.
Excel Elect. Service Co.
Fielden Instr. Div.
Foxboro Co.
Fuller Co.
Gems Co.
GE, X-Ray Dept.
Gilmore Industries
Instruments Inc.
Isotope Products, Inc.
Jarco Services, Inc.
Jeffrey Mfg. Co.
Jordan Corp.
Manning, Maxwell & Moore
Nuclear Corp. of Amer.
Nuclear Research
Ohmart Corp.
Oil Well Water Loc. Co.
Photobell Co.
Republic Flow Meters
Richardson Scale
Robertshaw-Fulton
Scrayco Mfg.
Shand & Jurs Co.
Trimount Instr. Co.
United Engineers, Inc.
Victory Engrg. Corp.

LEVEL INDICATORS and/or RECORDERS, Liquid, also Tank

Amer. Chain & Cable
Amer. Meter Co.
Ann Arbor Instr. Wks.
Anton Electronic Labs.
Askania-Werke, A. G.
Assoc. Valve & Engrg.
Autocall Co.
Autom. Control Co.
Autom. Timing & Control
Automation Prods., Inc.
Aviation Engrg. Co.
Avien, Inc.
B-I-F- Industries
B. W. Controller
Bacharach Indust. Instr.
Bailey Meter Co.
Baldwin-Lima-Hamilton
Barton Instr. Corp.
Basic Controls, Inc.
Bastion-Blessing
Bendix, Cincinnati Div.
Bendix, Eclipse-Pioneer
Bendix-Friez
Bendix, Pacific
Bin-Dicator Co.
Bogue Elect. Mfg. Co.
Boston Auto Gage
Bowser & Co.
Bristol Co.
Brooks Rotameter
Builders-Providence
Bunnell Co., J. H.
Campbell Co.
Can. Rad. & Uran.
Climax Div.
Control Corp.
Cook Electric
Crescent Engrg. & Res.
Crosby Steam Gage
Datran Electronics
Davis Reg. Co.
Deltron, Inc.
Diamond Power Specialty
Dickson Co.
Dwyer Mfg. Co.
Electric Auto-Lite
Elect. Indicator Corp.
Electric Tachom. Corp.
Elematic Equipt. Co.
Electronic Prods. Co.
Engineering Res. Assoc.
Ess Instr. Co.
Esterline-Angus
Excel Electric Service
Femco, Inc.
Fielden Instr. Div.
Fischer & Porter Co.
Fisher Governor
Fisher Research Lab.
Foxboro Co.
Frick Co.
Garlynn Engrg. Co.
Gems Co.
General Controls Co.
GE, Apparatus Sales
GE, X-Ray Dept.
Gilbert & Barker
Gilmore Industries
Gorn Electric
Gorrell & Gorrell
Gotham Instr. Co.
Gray Instr. Co.
Grove Valve & Reg.
Guardian Electric
Gurley, W. & L. E.
Hagan Chem. & Controls
Hammel-Dahl
Hartford Mach. Screw
Henschel Corp.
Hathaway Instr. Co.
Hawk Tool & Engrg.
Hays Corp.
Henry Valve Co.
Hill & Co., E. V.
Indust. Electronic Conts.
Indust. Electronics (Mass.)
Industrial Instr. Corp.
Instrument Lab. Inc.
International Filter Co.
Instruments Inc.
Jarco Services
Jerguson Gage
Jo-Bell Products
Johnston & Jennings
Jordan Corp.
Keckley Mfg. Co.
Kellogg Switchboard
King Engrg. Co.
Leeds & Northrup
Leupold & Stevens
Liquidepth Indicators
Liquidometer Corp.
Liquid Scale Gauge Co.
Liquidivision Gauge
Lonergan Co., J. E.
Lufkin Rule Co.
Lumenite Electronic
Magnetic Industries
Magnetrol, Inc.
Manning, Maxwell & Moore
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Marshalltown Mfg.
Mason-Neilan Div.
McAlear Mfg.
McNeill Engrg. Co.
Meriam Instr. Co.
Minneapolis-Honeywell
Mira Scientific Instr.
Moore Products
NRD Instr. Co.
Natural Gas Equipt. Co.
Norden-Ketay
Nuclear Corp. of Amer.
Nuclear Research
Ohmart Corp.
Oil Well Water Loc. Co.
Panalarm Products, Inc.
Panellit Corp.
Paragon Electric
Penberthy Injector Co.
Penn Insts. Div.
Pedometer Corp.
Petrometer Corp.
Phillips & Co., H. A.
Photoswitch Div.
Pitometer Log Corp.
Pneumercator Co., Inc.
Precision Radiation
Prec. Thermom. & Insts.
Preferred Utilities Mfg.
Radioactive Products
Rahm Instruments
Reliance Gauge Column
Remco, Inc.
Republic Flow Meters
Republic Mfg. Co.
Revere Corp.
Rochester Mfg. Co.
Rockwell Engrg. Co.
Rosen Engrg. Prods.
Schutte & Koerting
Shand & Jurs
Sheffield Corp.
Simmonds Aerocessories
Simplex Valve & Meter
Smith Corp., A. O.
Standard Valves Inc.
Statham Labs.
Strahman Valves, Inc.
Swartwout Co.
Stewart-Warner
Taylor Instr. Cos.
Texas Insts., Inc.
Texas Instrs. Ind. Div.
Tracerlab, Inc.
Trerice Co.
Trimount Instr. Co.
U C Indicator Sales
Uehling Instr. Co.
Ultradyne Engrg. Labs.
United Control Corp.
United Engineers, Inc.
U. S. Gauge Div.
Vapor Recovery Systems
Victory Engrg. Corp.
Viking Instruments
Virginia Electronics
Wallace & Tiernan
Water Level Controls
Weksler Thermom. Corp.
Warrick Co.

Westinghouse Electric
Weston Electcl Instr.
Wiancko Engrg. Co.
Williams Gauge Co.
Yarnall-Waring

LEVEL TRANSMITTERS (see also Pressure Differential Transmitters)

Automatic Control Co.
Askania-Werke, A. G.
Automation Prods., Inc.
B-I-F Industries
Bailey Meter Co.
Barton Instr.
Black, Sivalls & Bryson
Bendix Aviation Corp.
Bristol Co.
Fielden Instr. Div.
Fischer & Porter
Fisher Governor
Foxboro Co.
Hagan Chem. & Controls
Hays Corp.
Healy-Ruff
Instruments Inc.
Jarco Services, Inc.
Jerguson Gage
Leupold & Stevens
Liquidometer Corp.
Liquidivision Gauge & Con.
Manning, Maxwell & Moore
Mason-Neilan Div.
Minneapolis-Honeywell
Moore Products
Ohmart Corp.
Penn Insts. Div.
Republic Flow Meters
Robertshaw-Fulton
Shand & Jurs
Simplex Valve & Meter
Swartwout Co.
Taylor Instr. Cos.
United Engineers, Inc.
Vapor Recovery Systems
Water Level Ctrls.

LEVELLING SADDLES for Flowmeters, etc.

Amer. Meter Co.
Commercial Iron Works
Robinson Orifice Fitting

LEVELS, Abney

Bruning Co., Charles
Dietzgen Co., Eugene
Garlynn Engrg. Co.
Graf-Apsco Co.
Gurley, W. & L. E.
Jarrell-Ash
Leupold & Stevens
Opplem Co.
White Co., Inc., David

LEVELS, Dumpy, see Surveying Instruments

LEVELS, Hand, including Precision, Prism, and Spirit

Aremac Assocs.
Askania-Werke A. G.
Bache & Company, Semon
Berger & Sons
Berger Scient. Sups.
Bostrom-Brady
Bruning Co., Charles
Brunson Instr. Co.
Dietzgen Co.
DoAll Co.
Edmund Scientific
Electronic Prods. Co.
Engis Equipt. Co.
Ercona Corp.
Fecker Inc.
Ferner Co.
Fish-Schurman
Gaertner Scientific
Garlynn Engrg. Co.
Geier & Bluhm
Glogau & Co.
Graf-Apsco
Gray Instr. Co.
Griswold Mfg.
Gurley, W. & L. E.
Heiland Div.
Helio Instr. Co.
Jarrell-Ash
Keuffel & Esser
Leupold & Stevens
Los Angeles Scient.
Lufkin Rule Co.
Meyer-Opticraft
Millers Falls Co.
Opplem Co.
Pittsburgh Instr. & Mach.
Pratt & Whitney
QOS Corp.
Republic Lens Co.
Scherr Co.
Smith & Anderson
South Bend Lathe Works
Stanley Works
Starrett Co.
Stratex Instr. Co.
Suverkrop Instruments
Swift & Anderson, Inc.
Taft-Peirce
United States Blue Print
Warren-Knight
Weber Co., F.
White Co., Inc., David
Wild Heerbrugg
Zeiss, Inc., Carl

LEVELS, Surveying, see Surveying Instruments

LEVELS, Wye, see Surveying Instruments

LIE DETECTORS, see Polygraphs

LIGHT METERS, see Illumination

LIGHT SOURCES (see also Tubes, Discharge)

Alfa Amer. Corp.
Amer. Optical
Amglo Corp.
Basic Controls, Inc.
Berkeley Div.
Boone Instr.
Burton Mfg. Co.
Central Scientific
Chgo. Miniature Lamp Wks.
Cooper-Hewitt Elect.
Dialight Corp.
Dormitzer Elec. & Mfg.
DuMont Labs., Allen B.
Edmund Scientific
Erb & Gray
Fecker, Inc.
Fish-Schurman
Gaertner Scientific
Gates & Co.
GE, Lamp Div.
Green Rectifier Co.
Hanovia Chem. & Mfg.
Kemlite Labs.
Lab. Optical
Luxo Lamp Corp.
Macbeth Corp.
Machinery Electrification
Magnaflux Corp.
Menlo Research Lab.
Meyer-Opticraft
National Carbon
National Spectrographic
Palos Optical
Perkin-Elmer
Phoenix Prec. Instr.
Prec. Glass Prods. Co.
Precision Products
Rudolph & Sons
Scient. Inst. Dev. Lab.
Stocker & Yale, Inc.
Sylvania Elec. Prods.
Tri-Tronics Co.
Ultra-Violet Prods.
U. S. Radium
Welch Mfg. Co., W. M.
Western Elect. Corp.
Western Union
Worner Electronic Devices

LIGHT SOURCES, "Daylight" and White Light

Alden Systems
Amer. Optical
Amglo Corp.
Aristo Grid Lamp Prods.
Atlas Electric
Burton Mfg.
Chapman Labs.
Chgo. Miniature Lamp Wks.
Continental Electric
E & S Optical
Ferner Co.
Fredericks, George
Fuess, Inc.
Gaertner Scientific
Gates & Co., George W.
GE, Lamp Div.
Haledy Electronic Co.
Instrument Devel. Labs.
Jarrell-Ash
Kemlite Labs.
Larrimore Sales Co.
Lindley & Co.
Macbeth Corp.
Meyer-Opticraft
QOS Corp.
Rudolph & Sons
Sampson Chem. & Pigment
Stocker & Yale
Sylvania Elect. Prods.
Welch Mfg. Co., W. M.
Westinghouse Electric

LIGHT SOURCES, Incandescent

Alfa Amer. Corp.
Amer. Optical
Autron Engrg., Inc.
Basic Controls, Inc.
Bausch & Lomb
Berkshire Labs.
Burton Mfg. Co.
Chgo. Miniature Lamp Wks.
De-Tec-Tronic Corp.
Dialight Corp.
Dormitzer Elec. & Mfg.
Eby, Inc.
Electronics Corp. of Amer.
Engrg. Develp. Labs.
Electronics Devel. Lab.
Fecker, Inc.
Fisher-Pierce
Fredericks, George
G-M Labs.
Gaertner Scientific
Gates & Co.
GE, Lamp Div.
Green Rectifier
Herzog Minia. Lamp Wks.
Laboratory Optical
Larrimore Sales Co.
Leitz, Inc., E.
Lindley & Co.
Luxo Lamp Corp.
Macbeth Corp.
Meyer-Opticraft
Phoenix Prec. Instr.
Pimex, Inc.
Rockwell Engrg. Co.
Rudolph & Sons, O. C.
Signal Indicator Corp.
Stocker & Yale
Sylvania Elect. Prods.
Tung-Sol Electric Inc.
Welch Mfg. Co., W. M.
Worner Electronic Devices
Zeiss, Inc., Carl

LIGHT SOURCES, Infrared, see Infrared

LIGHT SOURCES, Monochromatic

Acme Scientific
Amer. Instr. Co.
Amglo Corp.
Baird-Atomic
Bausch & Lomb
Burton Mfg. Co.
Central Scientific
Chapman Labs.
Cooper-Hewitt
Crane Packing Co.
Davenport Mfg.
Davidson Mfg. Co.
Dearborn Scientific
DoAll Co.
Edmund Scientific
Engis Equipt. Co.
Ercona Corp.
Farrand Optical
Fecker, Inc.
Ferner Co.
Fish-Shurman
Fuess, Inc.
Gaertner Scientific
Gates & Co.,
GE Lamp Div.
General Physical Lab.
Green Rectifier Co.
Hanovia Chem. Mfg.
Huggins Labs.
Jarrell-Ash
Kemlite Labs.
Lab. Optical
Leitz, Inc.
Macbeth Corp.
Mico Instr. Co.
Opplem Co.
Optron Laboratory
Palos Optical
Perkin-Elmer
Pfaltz & Bauer
Phoenix Prec. Instr.
Polarizing Instr.
Prec. Glass Prods. Co.
Precise Measmts. Co.
Rudolph & Sons
Stocker & Yale
Scherr Co.
Van Keuren Co.
Williamson Devel. Co.
Westinghouse Electric
Zeiss, Inc. Carl

LIGHT SOURCES, Ultraviolet, see Ultraviolet

LIGHT WAVE MEASURING EQUIPMENT, see Spectrum Analyzers

LIGHTHOUSE INSTRUMENTS

Amer. Gas Accumulator
Triumph Mfg. Co.
Wallace & Tiernan

LIGHTHOUSE TUBES, UHF, see Tubes

LIGHTING CONTROLLERS, see Illumination Controllers

LIGHTING SYSTEMS, Instrument, see Pilot Lights

LIGHTS, see Pilot Lights

LIGHTS, Pilot, see Pilot Lights

LINE CURRENT TEST SETS

Ampco Mfg. Co.
Associated Research
Automatic Electric
Bourns Labs.
Cal-Tronics Corp.
Chicago Indust. Instr. Co.
Columbia Elect. Mfg.
El Mec Labs.
Elect. Facilities, Inc.
Electronic Devel. Lab.
Esterline Angus
Feiler Engrg. Co.
GE
General Electronic
Gray Instr. Co.
Hickok Electcl. Instr.
Instrument Laboratories
Kahn & Co.
Meter Devices Co.
Nelson Electric Mfg.
Precision Apparatus
Roller-Smith
Rubicon Co.
Sensative Res. Instr.
Sherron Metallic
Simpson Electric
Sticht Co., Herman H.
Triplett Electcl. Instr.
United Mfg. Co. Div.
Weston Electcl. Instr.

LIQUID LEVEL, Indicators or Recorders, see Level, Liquid

LIQUID METERS, Inferential Type, see Flowmeters, Inferential Type

LIQUID METERS, Positive Types, see Flowmeters, Positive Displacement

LOAD CELLS (see also Pressure, Weight)

Aero Electronics
Allegany Instruments
Baldwin-Lima-Hamilton
Chatillon & Sons
Crescent Engrg. & Res.
Daytronic Corp.
Dillon & Co.
Emery Co., A. H.
Fielden Instr. Div.
Foxboro Co.
Indikon Co.
Insco Company
Kistler Instr. Co.
Link Engrg. Co.
Martin-Decker Corp.
Phoenix Prec. Instr.
Ruge Assocs.
Statham Labs.
Taller & Cooper, Inc.
Task Corp.
Thwing-Albert
Westronics, Inc.
Wiancko Engrg. Co.

LOAD CONTROLLERS, Electrical

Allis-Chalmers
Assembly Products
B/W Controller
Baldwin-Lima-Hamilton
Bogue Elect. Mfg.
Bristol Co.
Burlington Instr. Co.
Cal-Tronics Corp.
Control Engrg. Co.
Cutler-Hammer
Daytronic Corp.
Dillon Co.
Dressen-Barnes Corp.
Ebert Electronics
Electric Reg. Corp.
Fielden Instr. Div.
Fisher-Pierce
Foxboro Co.
General Controls
GE, Apparatus Sales
Gilmore Industries
Havs Corp.
Jordan Co.
Kepco Labs.
Lear, Inc
Leeds & Northrup
Leslie Co.
Machinery Electrification
Magnetic Amplifiers
Magnetic Instr. Co.
Manning, Maxwell & Moore
Minneapolis-Honeywell
Mosher Electronic
Mullenbach Div.
Norcross Corp.
Ram Meter, Inc.
Robinette Co., W. C.
Sangamo Electric
Shallcross Controls
Sorensen & Co.
Spencer Thermostat Div.
Square D Co.
Stewart Instr. Co.
Streeter-Amet
Taller & Cooper, Inc.
Taylor Instr. Cos.
Westinghouse Electric
Wilson & Co., G. C.

LOAD CONTROLLERS, Weight, see Weight

LOAD INDICATORS and/or RECORDERS, Electrical (see also Power Factor)

Assembly Products
Associated Research
Automatic Electric
Bailey Meter
Baldwin-Lima-Hamilton
Barber-Colman
Bristol Co.
Burlington Instr. Co.
Chatillon & Sons
Crescent Engrg. & Res.
Daytronic Corp.
Duncan Elect. Mfg.
Electric Indicator Co.
Electrical Devel. Co.
Esterline-Angus
GE, Apparatus Sales
Gilmore Industries
HD Elect. Co.
Hagan Chem. & Control
Henschel Corp.
Indikon Co.
Kistler Instr. Co.
Landis & Gyr.
Leeds & Northrup
Machinery Electrification
Martin-Decker Corp.
Minneapolis-Honeywell
Performance Measmts.
Peschel Electronics, Inc.
Polyphase Instr.
Ram Meter, Inc.
Sangamo Electric
Sensitive Res. Instr.
Stewart Instr. Co.
Streeter-Amet
Sun Electric
Taller & Cooper, Inc.
Triplett Electcl. Instr.
WacLine, Inc.
Westinghouse Electric

LOCATORS, Fault, Electrical Resistance, see Fault Locator

LOCATORS, Pipe, see Metal Detectors

LOGGERS, Automatic Data, see Data Processing

LOUPES, Eye, see Optical Parts

LOUVER OPERATING DEVICES, see Valve Operating Devices, also Boiler Room Instruments

LUBRICANTS, Instrument, including Pivot, High Temperature, Low Temperature, etc.

Acheson Colloids

NEW Mic-O-Lite for Shadowless Illumination in

• Inspection • Investigation • Research

Mic-O-Lite is a cold light ring source designed especially to produce *"shadowless"* illumination on small objects, parts or specimens. It is an ideal source for visual inspection under magnification, but is primarily designed for low power microscopic inspection and photography in the industrial, scientific and research fields. Mic-O-Lite features a "ring light" 2½" in diameter. A doughnut type aluminum reflector which snaps onto the lamp provides a 1¼" aperture in the center through which the microscope or camera lens is focused. *A variety of interchangeable lamps including warm white, daylight white, blue, "Black Light" and germicidal are available.*

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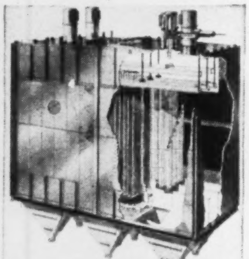

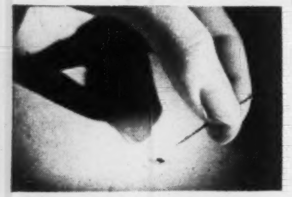

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Alpha Molykote
Amer. Optical
Bendix, Eclipse-Pioneer
Carbide & Carbon
Consolidated Vacuum Corp.
Crawford Fitting Co.
Custom Lubricant
Daven Co.
Distillation Products
Dixon, Inc.
DoAll Co.
Dow Corning
Eastern Specialty Co.
Edmund Scientific
Eitzen Co.
Elgin Natl. Watch
Ferner Co.
Gallien, R. P.
Gaunt Industries
G. E. Silicone Prod. Dept.
General Cement Mfg.
Graphite Metallizing
Hamilton Watch
Internat. Optical
Jadow Inc., B.
Johnson Engrg. Co.
Kimble Glass Co.
Landis & Gyr
Lehigh Chemical Prods.
Marshall Co.
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Nye, Inc.
Owens-Illinois
Precision Scientific
Rohm & Haas Co.
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LUMBER COUNTERS, see Counters

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Gallien, R. P.
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Newall Mfg. Co.
Nuclear Corp. of Amer.
Photo Chemical Prods.
Precise Measmts. Co.
Radiation Res. Corp.
Sampson Chem. & Pig.
Switzer Bros.
Sylvania Elect. Prods.
Ultra-Violet Prods.
U. S. Radium
Werner Co.

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Analogue Controls, Inc.
Arlin Products
Assembly Products
Austin Company
Automa. Corp. of Amer.
Automation Management
Autom. Switch
Autonetics Div.
Autron Engrg., Inc.
B/W Controller
Barnes Engrg. Co.
Bendix Aviation Corp.
Bendix, Computer Div.
Clark Controller Co.
Cleveland Instrument
ConRay Corp.
Control Engrg. Co.
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Cutler-Hammer.
Datascan Inc.
Devco Engrg.
El Mec Labs.
Electric Switch Corp.
Electro-Mech. Div.
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GE, Apparatus Sales
Genzlinger, Inc.
Giannini Datex Div.
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Hillyer Instr. Co.
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Industrial Electronics, Inc.
Indust. Gauges Corp.
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Jordan Co.
L & O Res. & Devel.
Lake Erie Electric
Lessells & Assocs.
Librascope, Inc.
Loral Electronics
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Magnetic Instr. Co.
Magnetic Research
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Moog Valve Co.
Nankervis Co.
Nelson Instr. Co.
Newton Co.
Norden-Ketay Corp.
Olympic Devel. Co.
Orban Co., Kurt
Phoenix Prec. Instr.
Photobell Co.
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Raytheon Mfg. Co.
Reeves Instr. Corp.
Scientific Instr. Co.
Servospeed Div.
Servo-Tek Products Co.
Sheffield Corp.
Sparton Cont. Systems
Spencer Mfg. Co.
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Stewart Instr. Co.
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Teleflex Inc.
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Topp Industries
Tri-Tronics Co.
Ultrasonic Corp.
VecTrol Engrg., Inc.
Vickers, Inc.
WacLine, Inc.
Warner & Swasey Res.
Western Gear Corp.
Westinghouse Electric

MACHINES, Automatic Circuit Assembly, including Automatic Wiring, Automatic Component Assembly, etc.

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Automatic Methods
Automation Management
Barnes Engrg. Co.
Burndy Engrg. Co.
Cincinnati Time Rec. Co.
Clevite Research Center
Davenport Mfg.
Design Tool Corp.
Engrg. & Research Corp.
Farrand Optical
High Speed Hammer
Hillyer Instr. Co.
Internatl. Business Mach.
Lake Erie Electric
Reeves Instr. Corp.
Sheffield Corp.
Taft-Peirce Mfg. Co.

MACHINES, Center Lapping

A & M Tool & Die
Ex-Cell-O Corp.
Hirschmann Co.
Scherr Co.
Taper Micrometer Corp.
Willey's Carbide Tool

MACHINES, Coil Winding

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Amer. Mach. & Foundry
Arnold Magnetics Co.
Brit. Industries Corp.
Coil Winding Equipt. Co.
Cosa Corp.
Crown Indust. Prod. Co.
Devel. Engrg. Co.
Dittmore & Freimuth
Electro Devices (Mass.)
Gallien, R. P.
General Winding Co.
Giannini & Co.
Globe Tool & Engrg.
Hamilton Tool Co.
Harder Co., Donald C.
High Speed Hammer
Kahle Engrg. Co.
Mico Instr. Co.
South Bend Lathe Works
Specialties, Inc.
Stanat Mfg.
Switchcraft, Inc.
Van Dyke Instruments

MACHINES, Contour Grinding and Metal Working

Alfa Amer. Corp.
Alina Corp.
Amer. Laubscher
Auto Engraver Co.
Bachmann Co., Eric R.
Bailey Vibrator Co.
Bendix Aviation Corp.
Brown & Sharpe Mfg.
Bryant Chucking Grinder
Cosa Corp.
DoAll Co.
Ex-Cell-O Corp.
Fenway Mach. Co.
Gisholt Machine Co.
Ferner Co.
Gorton Mach.
Hirschmann Co., Carl
Instrument Tool & Engrg.
Lucian Labs.
Oliver Instrument
Orban Co., Kurt
Porter Cable Mach.
Pratt & Whitney
Rivett Lathe & Grinder
Sheffield Corp.
Stanley Tools
Taft-Peirce Mfg. Co.
Triplex Machine Tool
Wade Tool Co.
Wickman Corp.

MACHINES, Die-Making

All Amer. Tool & Mfg.
Billings & Spencer Co.
Brown & Sharpe Mfg.
Cosa Corp.
DoAll Co.
Electro-Mechano Co.
Hirschmann Co.
Gorton Mach. Co., George
Germanow-Simon Mach. Co.
Orban Co., Kurt
Pratt & Whitney
Preis Engraving Mach. Co.
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Scherr Co.
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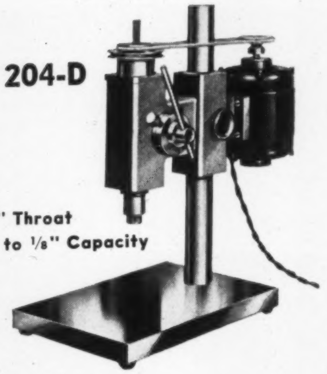
MACHINES, Disc Type, Lapping

Cosa Corp.

Precision drilling made easy!
The Phillips & Hiss



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Sensitive Speed Control: Foot operated, leaves both hands free.

High Precision: Spindle true within .0002". Table square .0001" per inch. Accuracy permanent, castings annealed and ground.

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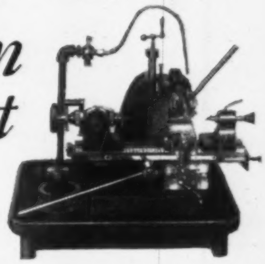

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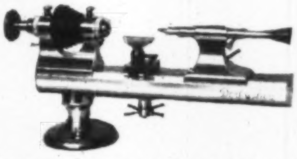
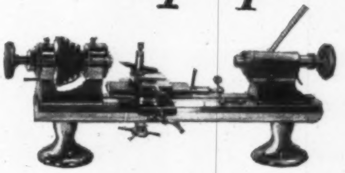
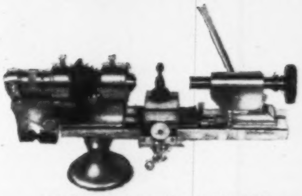


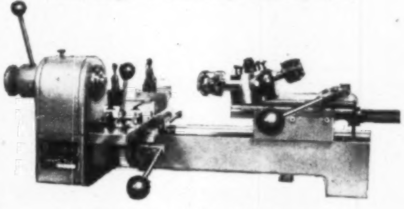
WEBSTER WHITCOMB 12" BED
Center Height—5 CM, Collet Capacity—.1969"



ELECT LATHE — 18" BED
Center Height—2.35" (6 CM)
Chuck Capacity—.004" to .315"



MAGNUS LATHE — 12" BED
Center Height — 5 CM
Collet Capacity — .315"



MODEL No. 750 — 22" BED
Center Height — 7.50 CM, Collet Capacity — .315"

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Greaves Mach. Tool Co.
Hayes Scient. App.
Hillyer Instr.
Hirschmann Co.
Industrial Electronics
Instr. Tool & Engrg.
Jarrell-Ash
Martin-Hubbard
Mico Instr. Co.
Micro Instr. Co.
Nichols-Morris Corp.
Precise Instr. Co.
Precise Measmts. Co.
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South Bend Lathe Works
Taft-Peirce Mfg. Co.
Taylor Mfg. Co.
Triplex Machine Tool Co.
V & E Mfg. Co.

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DoAll Company
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Gorton Machine Co.
Hirschmann Co.
Ingersoll-Rand
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Oliver Instr. Co.
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Pratt & Whitney
Raytheon Mfg. Co.
Stow Mfg. Co.

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Blackford Mfg. Co.
Bradford Mach. Tool Co.
Bryant Chucking Grinder
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Dixon, Inc.
DoAll Co.
DuMont Labs., Allen B.
Electro-Mechano Co.
Elgin Tool Wks., Inc.
Ex-Cell-O Corp.
Fenway Mach. Co.
Ferner Co.
Fineisen, A. R.
Gallien, R. P.
Gulton Industries
Halax Corp.
Hamilton Tool Co.
Hartford Spec. Mach. Co.
High Speed Hammer Co.
Hirschmann Co.
Industrial Electronics
Instr. Tool & Engrg.
Jessup Engrg. & Devel. Co.
Lab. Optical
Levin & Son, Louis
Lober Export-Import
Modern Tech. Supp.
New Hermes,
Oliver Instr. Co.
Orban Co., Kurt
Phillips & Hiss
Pratt & Whitney
Raytheon Mfg. Co.
South Bend Lathe Works
Taylor Dynamom. & Mach.
Triplex Mach. Tool Corp.

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Amer. Precision Dial
Bache & Company, Semon
Bausch & Lomb
Brunson Instr. Co.
Buhl Optical
Corning Glass Works
Cosa Corp.
Dessau Co.
Edna Lite Co.
Eisele & Co.
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Etched Products Corp.
Fischer & Porter Co.
Fish-Schurman
Gaertner Scientific
Glass Prods. Co.
Glasscraft Co.
Gorton Mach. Co.
Greiner Glassblowing Lab.
Gulton Industries
Gurley, W. & L. E.
Hirschmann Co.
International Optical
Koehler, W. F.
Lancaster Lens Co.
Levy & Co.
Marsco Mfg. Co.
Microcircuits Co.
Nester Co.
New Haven Clock
Nichols, Lyman
Orban Co., Kurt
Pacific Universal Prods.
Palos Optical
Perkin-Elmer
Phoenix Glass Co.
Phoenix Prec. Instr.
Precise Prods. Co.
Preis Engraving Mach.
Renick Co., L. C.
Simpson Optical
Stricker-Brunhuber Corp.
Teichert Engrg. Co.
Unertl Optical

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Cosa Corp.
DoAll Co.
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Gorton Mach. Co.
Greaves Machine
Green Instr. Co.
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Jadow Inc., B.
Mico Instr. Co.
Modern Tech. Supp.
New Hermes,
Orban Co., Kurt
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Precise Prods. Co.
Preis Engraving Mach.
Raytheon Mfg. Co.
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Popper & Sons
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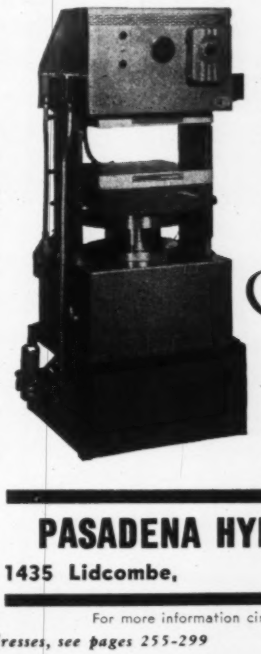

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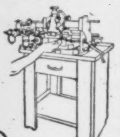

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Kahle Engrg. Co.
Litton Industries
Micro Instr. Co.
Teichert Engrg. Co.
Vacuum Tube Prods. Co.

MACHINES, Lathes, Precision

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Bachmann Co., Eric R.
Bayside Watch Tool
Bradford Mach. Tool Co.
Coaxial Connector Co.
Cosa Corp.
Derbyshire, Inc.
Dixon, Inc.
DoAll Co.
Elgin Natl. Watch
Elgin Tool Works
Ferner Co.
Fineisen, A. R.
Gallien, R. P.
Gisholt Machine Co.
Greaves Mach. Tool Co.
Guthery Mach. Tool Co.
Hardinge Bros.
Heitz, Inc., Karl
Hirschmann Co.
Instrument Tool & Engrg.
Jadow Inc., B.
Koehler Instr. Co.
Levin & Son
Litton Industries
Logan Engrg. Co.
Lorber Export-Import
Marshall Co.
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Orban Co., Kurt
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Rivett Lathe & Grinder
Scherr Co.
Scovill Mfg. Co.
Sheldon Mach. Co.
South Bend Lathe Works
Wade Tool Co.
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Ackerman Gould Co
Auto Engraving Co.
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Automation Equipt., Inc.
Crown Industrial Prods.
Force & Co., Wm. A.
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Hirschmann Co.
Jadow Inc., B.
Kahle Engrg. Co.
New Hermes, Inc.
Orban Co., Kurt
Parker-Hartford Corp.
Popper & Sons
Preis Engraving Mach.
Schmidt, Inc., Geo. T.
Sheffield Corp.
Studebaker Hydraulic Prods.
Techniques Inc.
Teichert Engrg. Co.
United Shoe Mach.

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A & M Tool & Die
Bachmann Co., Eric R.
Benchmaster Mfg.
Brown & Sharpe
Cosa Corp.
DoAll Co.
Erco Div.
Federal Tool Engrg. Co.
GE
Instrument Tool & Engrg.
Kahle Engrg. Co.
Landis Machine Co.
Lemart Engrg. Co.
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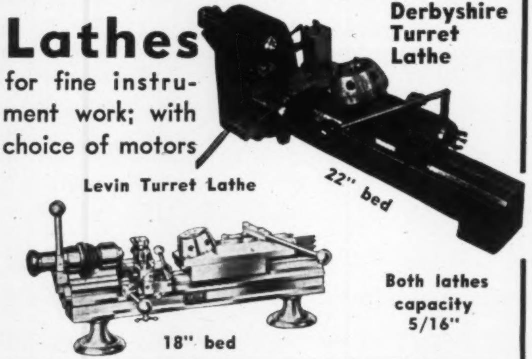

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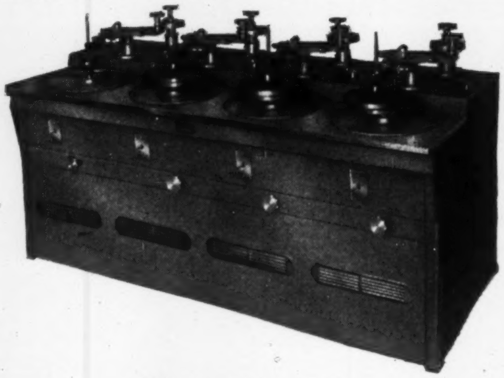

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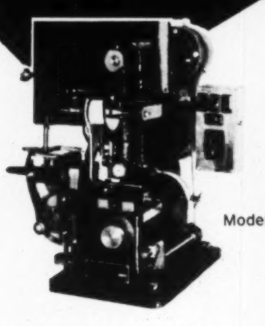

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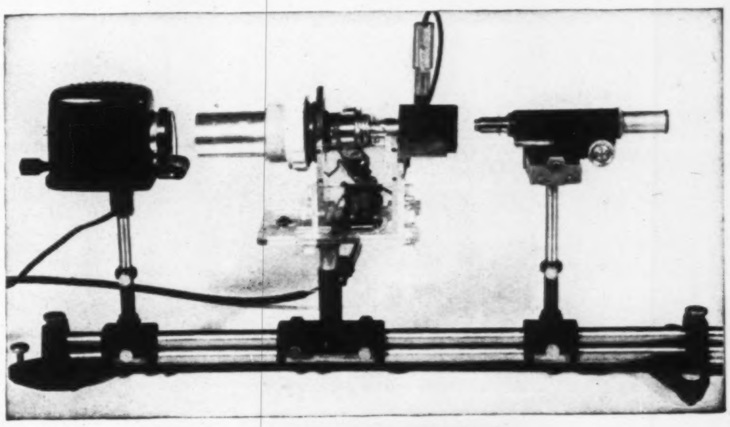

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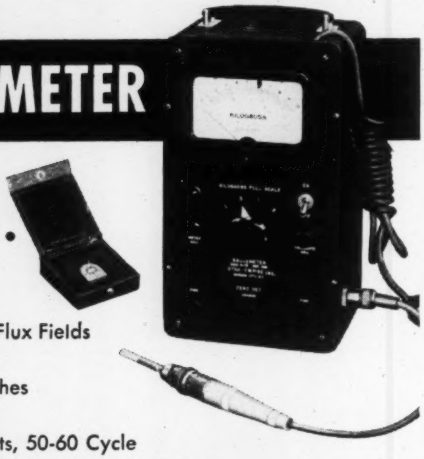

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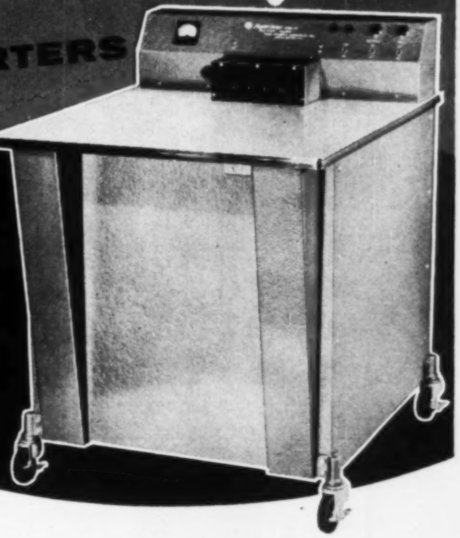

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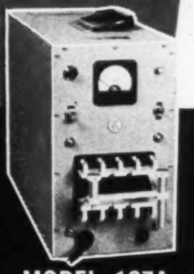

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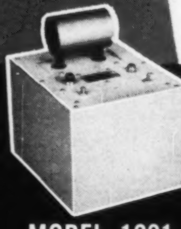

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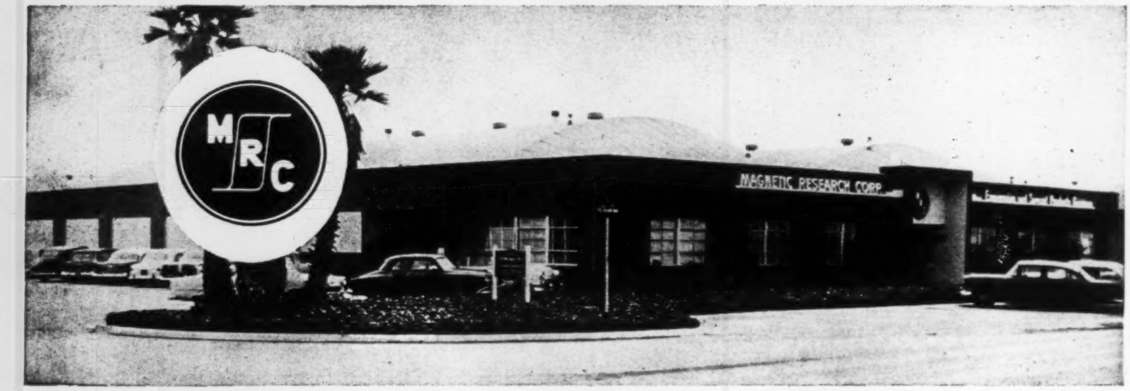

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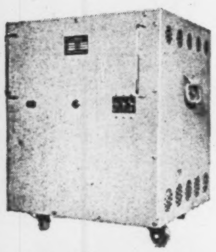
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Provides 1000 watt continuous output to reference phase and 1000 watt phase-reversible output to control phase. Designed for ¾ h.p., 2 phase, 60 cycle servo motor. Ultra-fast response of less than 30 ms approaches theoretical limit. Incorporates a Scott connected transformer for change of 3-phase power into 2-phase output. Eliminates slow acting, bulky type rotating equipment or hydraulics. Completely static circuitry insures maintenance-free unattended operation.

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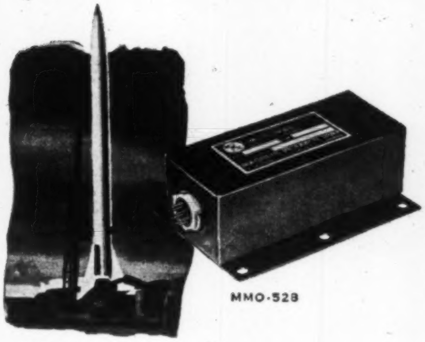
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Powered from 28 volt aircraft or missile systems—draws 20 milliamperes

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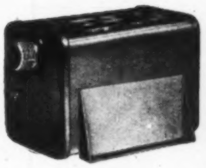
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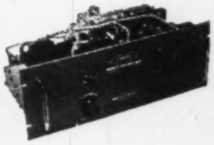
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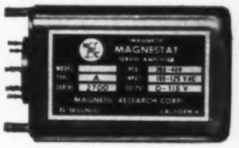

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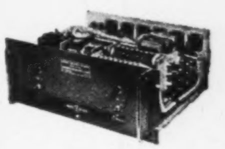
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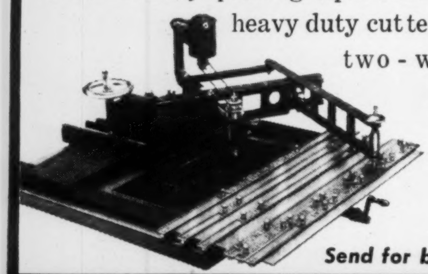

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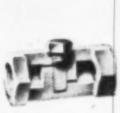

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Holds rate of flow of air or gas at .04 cfm for purging instrument air lines.

Is also a pulsation damper for use with pressure gauges and recorders.

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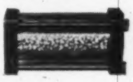
Indicates rate of flow by rise of bubbles thru liquid in glass or plastic cylinder. Needle valve gives precise flow adjustment. Tested for 100 psi.



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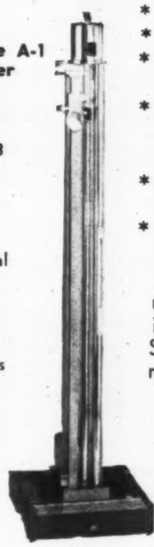

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Conforms to Spec. Mil-B-4308

Measures Absolute or Differential Pressures

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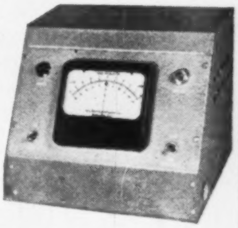

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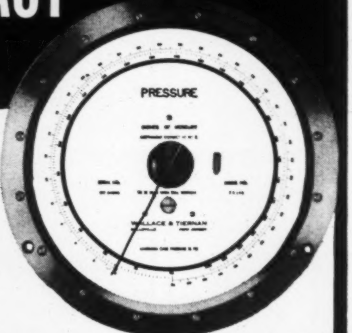

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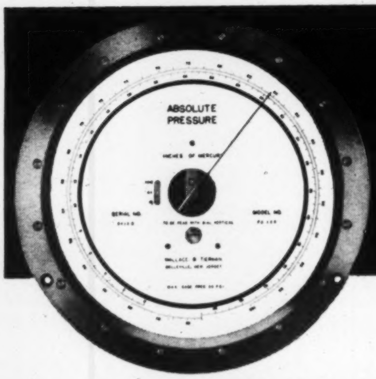

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THE CALIBRATING STANDARD
...For Absolute Pressure Work

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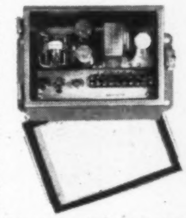
Control or count without contact



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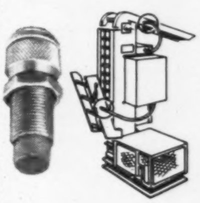

Standard proximity pickup. Detects small metal objects at speeds down to zero. Use for automatic feed, etc.
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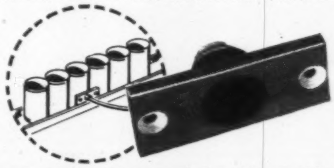

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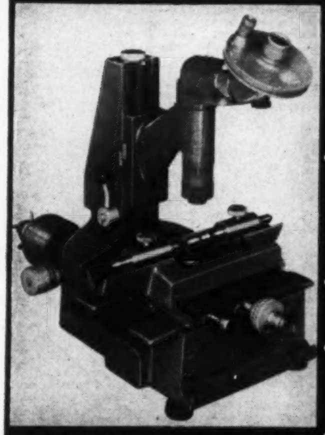

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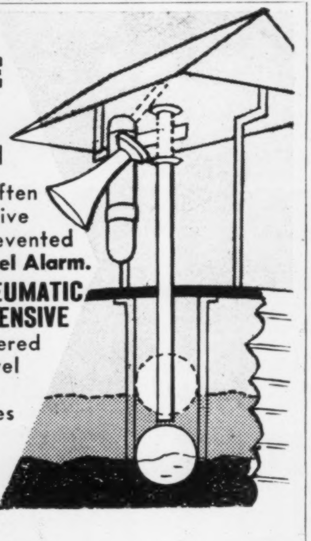

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Behm & Sons
Boehmke Optical
Bray Optical
Bronoptics Co.
Buhl Optical
Cal-Astro Optical Labs.
Cohn Corp., Sigmund
Commercial Optical
Corning Glass Wks.
Curtis Labs., Inc.
Davidson Mfg.
Dearborn Glass Co.
Dearborn Scientific
E & W Optical Co.
Edin Co.
Edmund Scientific
Edna Lite Co.
Engis Equipt. Co
Esco Prods. Co.
Evap. Metal Films
Farrand Optical
Fecker, Inc.
Fish-Schurman
Fuess, Inc.
Gaertner Scientific
Garlynn Engrg. Co.
Gordon Enterprises
GE
Glass Specialty
Goerz Amer. Optical
Gurley, W. & L. E.
Hanovia Chem. Mfg.
Hathaway Instr. Co.
Henson, Fred C.
Herron Optical
Internat. Optical
Jaegers, A.
Jones Optical Works
Keim Prec. Mirrors
Koehler Instr. Co.
Kollmorgen Optical
Lab. Optical
Leroy Clausing Co.
Marine Compass Co.
Metavac, Inc.
Meyer-Opticraft
Micromat Co.
Miller Instruments
National Research Corp.
Northrop Anaheim
Optical Coating Lab.
Optical Film Engrg.
Optron Lab.
Pacific Optical
Pacific Univ. Prods.
Palos Optical
Pancro Mirrors, Inc.
Penn Opt. & Instr. Co.
Perkin-Elmer
Practo Photo
Precision Products
Ransom Labs., John H.
Regal Instr. Co.
Schneider-Cogswell
Simpson Optical
Starr Corp.
Texas Insts., Inc.
Tinsley Labs.
Unertl Optical
Univis Lens Co.
Wilder, Inc.
Zenith Optical Co.
Zenith Optical Lab.

MIRRORS, Semi-Transparent

Bache & Company, Semon
Baird-Atomic
Bausch & Lomb
Behm & Sons
Boehmke Optical
Bray Optical
Bronoptics Co.
Buhl Optical
Cal-Astro Optical Labs.
Commercial Optical
Curtis Labs. Inc.
Davidson Mfg.
E & W Optical
Eastman Kodak
Edmund Scientific
Edna Lite Co.
Evap. Metal Films
Farrand Optical
Fecker Inc.
Fish-Schurman
Gaertner Scientific
Garlynn Engrg. Co.
Genl. Scient. Corp.
Gordon Enterprises
Green Rectifier Co.
Houston Technical Labs.
International Optical
Jaegers, A.
Jones Optical Works
Keim Prec. Mirrors
Kinney Mfg. Div.
Kollmorgen Optical
Lab. Optical
Leroy Clausing Co.
Metavac, Inc.
Micromat Inc.
Miller Instruments
Nikon, Inc.
Northrop Anaheim
Optical Coating Lab.
Optical Film Engrg. Co.
Optron Lab.
Pacific Optical
Pacific Univ. Prods.
Palos Optical
Pan-Technics, Ltd.
Pancro Mirrors, Inc.
Perkin-Elmer
Phoenix Prec. Inst.
Practo Photo Acces
Prec. Prods. Co.
Regal Instr. Co.
Schneider-Cogswell
Simpson Optical
Starr Corp.
Texas Insts., Inc.
Tinsley Labs.
Unertl Optical
Zenith Optical Co.
Zenith Optical Lab.

MODULATION INDICATORS

ARF Products
Air-O-Tronics
Amer. Electroneering
Baird-Atomic
Cole Instr. Labs.
Computer Co. of Amer.
Donner Scientific
Electronic Devel. Lab.
Farnsworth Electronics
Federal Telephone & Radio
GE
General Radio Co.
Industrial Control
Kay Electric Co.
Knights Co.
Lampkin Labs., Inc.
Marconi Instruments
Marion Electcl. Meter
New London Instr.
Panoramic Radio Co.
RCA Div.
Radio City Products
Sylvania Elect. Prods.
Virginia Electronics
Weston Electcl. Instr.

MODULATORS, Magnetic

Airpax Prods. Co.
Avion Div.
Brit. Electronic Sales
Clark Controller
Filtron Co., Inc.
General Magnetics
Helipot Div.
Hycor Div.
Magnetic Amplifiers
Magnetic Research Corp.
Potter Instr. Co.
Servo Corp. of America
Std. Electronic Res.
Stavid Engrg., Inc.
Sylvania Elect. Prods.
Texas Div., Brush
Timely Insts. & Conts.
Torwico Elects., Inc.
Trerice Electronics, Inc.

MOISTURE CONTROLLERS, see Humidity

MOISTURE INDICATORS (see also Humidity also Environmental Test)

Brabender Corp.
Cambridge Instr. Co.
Delmhorst Instr. Co.
Dittert Co.
Electronic Prods. Co.
Ferner Co.
GE
H & H Thermostats
Hart Moisture Gage
King Engrg. Co.
Marconi Instruments
Measurements Corp.
Moisture Register Co.
Precision Scientific
Seedburo Equipt. Co.
Serdex, Inc.
Sherron Metallic
Tri-Dex Electronics
Weston Electcl. Instr.

MOLECULAR STILLS, see Distillation Apparatus

MOLDERS OF PLASTICS

Aero Supply Mfg. Co.
Aerolite Electronics
Allegheny Plastics
Alden Products
Amer. Hard Rubber Co.
Amer. Phenolic Corp.
Ampco Mfg. Co.
Armstrong Cork
Auburn Button Wks.
Barber-Colman
Bel-Art Products
Blossom Mfg. Co.
Boonton Molding Co.
Breeze Corp.
Buchanan Elec. Prods.
Canfield Rubber Co.
Carbide & Carbon
Carroll Co., J. B.
Chicago Molded Prods.
Consol. Mld. Prods.
Continental-Diamond Fibre
Crane Packing Co.
Dimco-Gray
Dynakon Corp.
Eastern Prec. Resistors
Eby, Inc., Hugh H.
Edroy Products
Electro Devel. Co.
Electronic Mechanics
Erie Resistor
Felsenthal & Sons
Formica Co.
Garde Mfg.
Garlock Packing
GE
General Industries Co.
Gits Molding Corp.
Grammes & Sons
Grayhill
Gries Reproducer
Grigoleit Co.
Imperial Molded Prods.
Inlaid Optical
Instrument Corp.
Instrument Tool & Engrg.
Joy Mfg. Co.
Keller Products
Kellogg Switchboard
Kulka Elect. Mfg. Co.
Lab-Tronics
Lancaster Glass
Luzerne Rubber
Millen Mfg. Co.
Molded Insulation Co.
N. Y. Scient. Supply
Raybestos-Manhattan
Regal Plastic Co.
Remler Co.
Richardson Co.
Rogan Bros.
Sillcocks-Miller
Slip Ring Co. of Amer.
Specialty Insuln. Mfg.
Stanley Works
Stokes Molded Prods.
Surprenant Mfg. Co.
Sylvania Elect. Prods.
Taylor Mfg. Co.
Telex, Inc.
Tube Turns Plastics
Tungsten Contact Mfg.
U. S. Gasket Co.
Viking Indus., Inc.
Waterbury Cos.
Werner Co.
White Dental Mfg.

MOLDS for PLASTIC and RUBBER

Acme Scientific
A & M Tool & Die Co.
Amer. Hard Rubber Co.
Canfield Rubber Co.
Chicago Molded Prods.
Eastern Prec. Resistors
Electro Devel. Co.
Gorton Machine Co.
Grigoleit Co.
Instrument Tool & Engrg.
Jessop Steel
Joy Mfg.
Lancaster Glass
Molded Insulation Co.
Remler Co.
Res. Appliance Co.
Richardson Co.
Rogan Bros.
Scheidl Mfg. Co.
Schmidt, Inc., Geo. T.
Slip Ring Co. of Amer.
Specialty Insuln. Mfg.
Sylvania Elect. Prods.
Taylor Mfg. Co.
Tungsten Contact Mfg.
Viking Indus., Inc.
Waterbury Cos.
Western Supplies Co.

MOLYBDENUM

Amer. Electro Metal
Amer. Silver Co.
Anti-Corrosive Mtl. Prods.
Baker Chem. Co.
Belmont Smg. & Refg.
Cleveland Tungsten
Cohn Corp., Sigmund
DoAll Co.
Electronic Parts Mfg.
Fansteel Metallurgical
GE, Lamp Wire & Phos.
Kemet Labs.
Mallory & Co., P. R.
Minn.-Honeywell, Indus.
North Amer. Philips
Radial Metal Prod.
Secon Metals Corp.
Stupakoff Div.
Sylvania Elect. Prods.
Universal-Cyclops
Westinghouse Electric
Wilson Co., H. A.

MONEL METAL PARTS

Aero Supply Mfg.
Albany Prods. Co.
Anti-Corrosive Mtl. Prods.
Autoscrew Co.
Conant Bros. Co.
Crawford Fitting Co.
Deringer Metallurgical
Dragon Engrg. Co.
Driver-Harris
Falstrom Co.
Gervos Instruments
Grammes & Sons
Hartford Mach. Screw
Instrument Parts Corp.
Koehler Instr. Co.
Lewyt Corp.
Newark Wire Cloth
Radial Metal Prod.
Rochester Mach. Screw
Schnitzer Alloy Prods.
Star Stainless Screw
Staver Co., Inc.
Sylvania Elect. Prods.
Tinnerman Products
U. S. Indesble. Gasket
Webber Metal Works
Western Auto. Mach. Sc.

MONITORS, Including Annunciators

Airborne Instruments
Auth Elect. Spec.
Authorized Mfrs. Service
Autocall Co.
Autom. Control Co.
Automatic Electric
Automatic Elect. Mfg.
Autom. Timing & Control

Bailey Meter Co.
Beck & Co.
Bendix, Pacific
Betts & Betts
Biddle Co., James G.
Bogue Elect. Mfg.
Bristol Co.
Browning Lab.
Bullard Co.
Cal-Tronics Corp.
Cannon Electric
Century Electronics
Cincinnati Time Rec.
Colortone Electronics
Con Ray Corp.
Cook Electric
Cooper Co., Clark
De-Tec-Tronic Corp.
Eastern Industries
Edison, Inc., Thomas A.
Edwards, L. V.
Elect. Indicator Corp.
Electro Devices (St. Louis)
Fielden Instr. Div.
Fisher & Porter Co.
Foxboro Co.
GE, Apparatus Sales
Guardian Elect. Mfg. Co.
Haydon Co., A. W.
Henschel Corp.
Holtzer-Cabot
Hupp Instrumation
Industrial Timer Corp.
Instruments Inc.
Internat. Bus. Mach.
International Res. & Dev.
Jaidinger Mfg.
Jarco Services
Kirkland Co.
Koehler Instr. Co.
Kybernetes Corp.
Lampkin Labs.
Larson Instrument
Leeds & Northrup
Leslie Co.
Leupold & Stevens
Lumenite Electronic
Magnecord, Inc.
Magnetrol, Inc.
Martin-Hubbard
Mason-Neilan Div.
Mine Safety Appliances
Montgomery Mfg. Co.
National Time & Signal
NRD Instr. Co.
Nelson Electric Mfg.
Nuclear Research
Panellit, Inc.
Phoenix Prec. Instr.
Photoswitch Div.
Production Instr. Co.
Raytheon Mfg. Co.
Rochester Mfg. Co.
Scam Instr. Corp.
Servo Corp. of Amer.
Signal Engrg. & Mfg.
Science Engrg. Co.
Standard Elect. Time
Syncro-Start Prods.
Taller & Cooper
Tele-Dynamics
Thermo-Electric Co., Inc.
Thompson Clock
Tigerman Engrg. Co.
Union Switch & Signal
Victoreen Instr. Co.
Viking Instruments
Wallace & Tiernan
Warren Telechron

MONITORS, Radioactivity, see Radiation Alarms, also Radioactivity

MONOCHROMATIC LIGHT SOURCES, see Light Sources, Monochromatic

MONOCHROMATORS, including Infrared

Applied Physics Corp.
Applied Research Labs.
Baird-Atomic
Bausch & Lomb
Beckman Div.
Biddle Co., James G.
Cambridge Thermionic
Ercona Corp.
Farrand Optical
Fecker, Inc.
Ferner Co.
Gaertner Scientific
GE, X-Ray Dept.
Green Rectifier Co.
Instrument Devel. Labs.
International Devel. Co.
Jarrell-Ash
Kauffman-Lattimer
Lab. Optical
Leeds & Northrup
Leitz, Inc.
Los Angeles Scientific
Opplem Co.
Perkin-Elmer
Phoenix Prec. Inst.
Photovolt Corp.
Process & Instruments
Rudolph & Sons
Servo Corp. of Amer.
Texas Insts., Inc.
Zeiss, Inc., Carl

MOTION INDICATORS and/or RECORDERS, see Displacement, also Speed, also Accelerometers

MOTOR CONTROLLERS & REGULATORS

Allen-Bradley Co.
Amer. Kloeckner-Moeller
Autm. Switch Co.
B/W Controller Corp.
C. G. S. Labs.
Cutler-Hammer Inc.
Dales Co., Franklin
Furnas Electrical Co.
GE Gen. Purp. Contr.
General Radio Co.
Green Rectifier Co.
Hanson-Gorrill-Brian
Leach Corp.
Magnetic Amplifiers
Motor Sales Div., Fasco
Nelson Electric Mfg.
Ohmite Mfg. Co.
R. K. L. Valve & Mfg.
Ribble Engrg. Co.
Servo-Tek Products
Southwestern Mfg.
Trerice Co., H. O.
Wac Line, Inc.
Ward Leonard Elect.
Westinghouse Electric

MOTOR SPEED Controllers, see Motor Controllers

MOTOR STARTERS, see Starters, Motor

MOTORS, Clock, see Clockworks

MOTORS, Fractional Horsepower, including Reversible and/or Synchronous

Airborne Access. Corp.
AiResearch Mfg.
Air-Marine Motors
Allard Instr. Corp.
Alliance Mfg. Co.
Amer. Electric Motor
Amer. Electronics
Amglo Corp.
Ashland Elect. Prods. Co.
Askania-Werke, A. G.
Barber-Colman
Bekey Electric
Bendix, Eclipse-Pioneer
Bendix, Red Bank Div.
Bodine Electric
Borg Equipt. Div.
Bristol Motor Div.
Brown-Brockmeyer
Burke Electric
Burton Mfg.
Cardwell Mfg.
Carter Motor Co.
Cedar Engrg., Inc.
Century Electric
Chatillon & Sons
Clifton Prec. Prods.
Controls Co. of Amer.
Cramer Controls Corp.
Cyclohm Motor Corp.
Dalmotor Co.
DeJur-Amsco
Delco Appliance Div.
Diehl Mfg. Co.
Doerr Elect. Corp.
Eastern Air Devices
Edison, Inc., Thomas A.
Eicor, Inc.
Electric Indicator Co.
Elec. Motors & Specialties
Electric Spec. Co.
Electric Switch Corp.
Electro Engrg. Prods.
Electro Mechano Co.
Electronic Communication
El Ray Motor Co.
Elsbert Mfg.
Esterline-Angus
Fairbanks, Morse & Co.
Fairchild Camera
Fairchild Industries Div.
Fasco Industries, Inc.
Fidelity Electric
Ford Instr. Co.
G-M Labs.
Gallien, R. P.
GE, Apparatus Sales
GE Clock & Timer Dept.
General Controls
Genl. Industries
General Motors, Delco Div.
Giannini & Co.
Gleason-Avery
Globe Industries
Hagen Mfg. Co.
Hansen Mfg. Co.
Hathaway Instr. Co.
Haydon Co., A. W.
Heinze Electric
Heller Co.
Holtzer-Cabot
Howard Industries
Howell Elect. Motors
Hubbell Metals, Inc.
Hupp Electronics
Induction Motors Corp.
Instrument Motors Co.
Intelex Systems
International Register
Jack Scient. Instr. Co., Bill
Jadow Inc.
Janette Mfg.
Kearfott Co.
Kendrick & Davis
Kollsman Instr. Corp.
L & R Mfg. Co.
Lafayette Instr. Co.
Lamb Electric
Landis & Gyr
Lear, Inc.
Leland Electric
Luther Mfg. Co.
Marble-Card
Marco Industries
Master Electric
Merkle-Korff
Minneapolis-Honeywell
  Boston Div.
Mission-Western
Modern Tech. Supp.
Motordyne Inc.
Natl. Pneumatic Co.
National Time & Signal
New Haven Clock
Newall Mfg. Co.
Norcross Corp.
Ohio Elect. Mfg.
Oster Mfg. Co.
Peerless Electric
Pesco Products
Precise Prods. Co.
Precision Mfg. Co.
Raytheon Mfg. Co.
Redmond Co.
Reeves Instr. Co.
Reynolds Electric
Rotating Components
Robbins & Meyers
Sangamo Electric
Scovill Mfg.
Scruggs Co.
Servomechanisms, Inc.
Servo-Tek Products
Siemon Engrg. Co.
Signal Elect. Mfg.
Small Motors, Inc.
Specialty Battery Co.
Speedway Mfg. Co.
Sperry Gyroscope
Std. Dayton Corp.
Summers Gyroscope
Syntorque, Inc.
Taller & Cooper, Inc.
Task Corp.
Technical Devel. Corp.
Thermador Electcl. Mfg.
Seth Thomas Clocks
Times Facsimile Corp.
U. S. Electcl. Motors
WacLine, Inc.
Wagner Elect. Corp.
Western Gear Corp.
Westinghouse Electric

MOTORS, Geared

Acro Mfg. Co.,
Airborne Access. Corp.
Air-Marine Motors Inc.
Amer. Electronics
Amglo Corp.
Ashland Elect. Prods.
Barber-Colman
Bekey Electric
Bendix, Eclipse-Pioneer
Bodine Electric
Borg Equipt. Div.
Brevel Prods.
Brown-Brockmeyer
Cramer Controls Corp.
Cyclohm Div.
Dalmotor Co.
Diehl Mfg.
Eastern Air Devices
Electomic Mechanisms
Electro Engrg. Products
Electronic Communication
El Ray Motor Co.
Fairbanks Morse & Co.
Fairchild Industries
Feedback Controls
Ford Instr. Co.
GE, Apparatus Sales
Genl. Industries
Gleason-Avery
Globe Industries, Inc.
G. M. Labs., Inc.
Hansen Mfg. Co.
Haydon Co., A. W.
Haydon Mfg. Co.
Heinze Electric
Heller Co., G. K.
Höltzer-Cabot
Howard Industries
Induction Motors Corp.
Instrument Motors
Kearfott Co.
Kollsman Instr. Co.
Lamb Electric
Lear, Inc.
Lectronic Research Labs.
Master Electric
Merkle-Korff
Minneapolis-Honeywell
  Boston Div.
Motordyne Inc.
Natl. Pneumatic Co.
Oster Mfg. Co., John
Peerless Electric
Pesco Products
Phila. Gear Works, Inc.
Siemon Engrg. Co.
Reliance Elect. & Engrg.
Res. Appliance Co.
Robertshaw-Fulton
Robbins & Myers
Rotating Components
Sangamo Electric
Scruggs Co.
Servomechanisms, Inc.
Servo-Tek Products
Small Motors Inc.
Speedway Mfg.
Std. Dayton Corp.
Sterling Prec. Instr.
Summers Gryoscope
Systems Analyzer Corp.
Task Corp.
U. S. Electcl. Motors
WacLine, Inc.
Western Gear Corp.
Westinghouse Electric

MOTORS, Laboratory

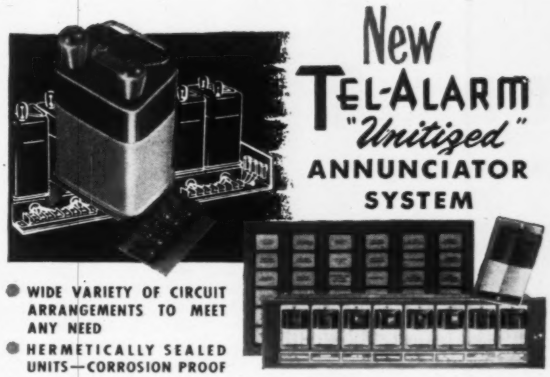
Ace Glass
Air-Marine Motors
Amglo Corp.
Arma Corp.
Ashland Elect. Prods.
Barber-Colman
Bekey Electric
Bodine Electric
Borg Equipt. Div.
Bogue Elect. Mfg.
Central Scientific
Cramer Controls Corp.
Crow Electri-Craft
Cyclohm Div.
Dalmotor Co.
Eastern Air Devices
Elect. Indicator Co.
Fairbanks, Morse & Co.
Fasco Industries
Ford Instr. Co.
G.E. Apparatus Sales
GE Clock & Timer Dept.
Genisco, Inc.
Gleason-Avery
Greiner, Emil
Haydon Co., A. W.
Haydon Mfg. Co.
Heller Co., G. K.
Holtzer-Cabot
Howard Industries
Induction Motors Corp.
Instr. Motors Co.
Kollsman Instr. Div.
L.A.B. Corp.
L. & R. Mfg. Co.
Lectronic Res. Labs.
Marco Industries
Master Electric
Merkle-Korff
Minneapolis-Honeywell
  Boston Div.
National Pneumatic Co.
Oster Mfg.
Palo-Myers
Parr Instr. Co.
Peerless Electric
Res. Appliance Co.
Robbins & Myers
Rotating Components, Inc.
Scruggs Co.
Servomechanisms, Inc.
Servo-Tek Prods.
Small Motors, Inc.
Summers Gyroscope
Syntorque, Inc.
Task Corp.
Thermador Electcl. Mfg.
Times Facsimile Corp.
WacLine, Inc.
Western Gear Corp.
Westinghouse Electric

MOTORS, Servo, see Servomotors

MOTORS, Step type, see Switches, Stepping

MOTORS, Synchronous

AiResearch Mfg.
Air-Marine Motors
Alina Corp.
Amer. Electronics Inc.
Amglo Corp.
Ashland Elect. Prods.
Barber-Colman
Beck Co.
Bendix, Eclipse-Pioneer
Bekey Electric
Bodine Electric
Bogue Elect. Mfg.
Borg Equipt. Div.
Bristol Motor Div.
Burke Electric
Clifton Prec. Prods.
Coleman Instruments
Columbia Elect. Mfg.
Cramer Controls Corp.
Cyclohm Div.
Dalmotor Co.
Eastern Air Devices
Electric Indicator Co.


New
TEL-ALARM
"Unitized"
ANNUNCIATOR SYSTEM

- WIDE VARIETY OF CIRCUIT ARRANGEMENTS TO MEET ANY NEED
- HERMETICALLY SEALED UNITS—CORROSION PROOF
- BACKLIGHTED NAMEPLATES OR TURRET LENSES
- STANDARDIZED FOR EASY USE—LOWER COST

HERE is the first "unitized" annunciator. Tel-Alarm incorporates a basic relay unit with many different circuit arrangements available. Tele-Alarm is completely standardized for low cost and easy maintenance.

Tel-Alarm is corrosion proof, hermetically sealed and meets any Class 1, Division 2 application. The units are completely self-contained—no complicated wiring—and merely plug into a standard Tel-Alarm chassis. Simple and easy to install.

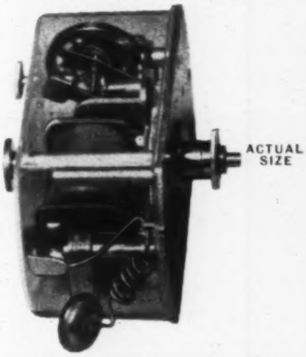
You can get backlighted nameplates or the new Tel-Alarm *giant* turret lenses for greater visibility. Check into Tel-Alarm today.

Send for your free copy of Bulletin 440
Contains complete circuit sequence diagrams, full range of models for every need.

Tigerman Engineering
COMPANY
4332 North Western Ave., Chicago, Ill.
"Protecting America's Industry"

For more information circle **203** on inquiry card.

THE NEW ELIX



BALANCE-CONTROLLED D.C. MOTOR

- OPERATES ON A FLASHLIGHT BATTERY FOR MANY MONTHS.
- UNSURPASSED FOR UNATTENDED RECORDING DEVICES.
- USED BY GOVT. AGENCIES.
- OUTPUT SPEEDS:
  1 REV. PER 1 HOUR, 12 HOURS OR 24 HOURS
- SPECIAL DESIGNS FOR SMALL-RUN PRODUCTION CONSIDERED.

WRITE FOR FURTHER DETAILS

EL PRODUCTS CORP.
P. O. Box 41   New York 63, N. Y.

For more information circle **204** on inquiry card.

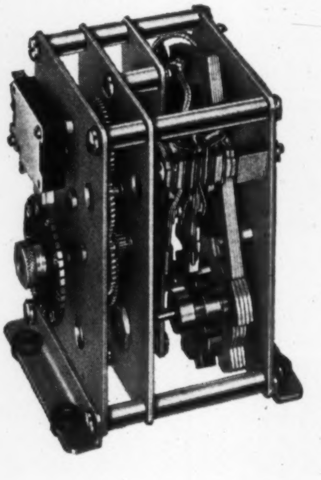
Vital

MILITARY, INDUSTRIAL & RESEARCH EQUIPMENT

made possible by

AMGLO

Reed-Controlled DC Motors and Timers



High Torque (200 in. oz. at 1 RPM) —operates from 1 to 30 cams and switches to provide circuit closure at specified sequences and duration.

Low Current Drain—long operation from small batteries or other DC supply.

Magnetic Reed-Control—maintains phenomenal speed accuracy over wide voltage and load variations.

Amglo DC Motors can be furnished—

(1) with built-in reduction gear and output shaft of required speed for mounting cams and switches, and driving other mechanisms, or

(2) the complete timer in one compact unit with cams and switches installed to provide exact sequence specified.

Special Precision AC Timers—built to specifications.

Be sure you have complete data, including performance curves of Amglo Reed-Controlled DC Motors and Timers, on hand—send for your copy.

Quotations and Recommendations without obligation

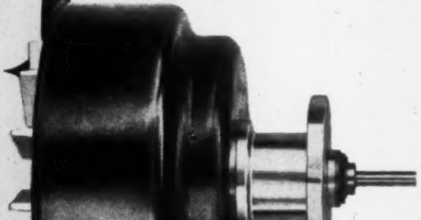
AMGLO CORPORATION

4333 NORTH RAVENSWOOD AVENUE
CHICAGO 13, ILLINOIS

For more information circle **205** on inquiry card.

3 THREE *Speed*

HYSTERESIS MOTOR



Motor Line includes Single and Dual Speed and Torque Motors available in sizes of 3" and 5 1/2" dia.

WRITE FOR CATALOG

Provides direct drive tape speed of 3 3/4", 7 1/2" and 15" per second. Precision Ground Capstan ...ideal for High Fidelity Recording & Reproducing Equipment.

TECHNICAL ELECTRONICS CORP.

4060 INCE BOULEVARD • CULVER CITY, CALIFORNIA

For more information circle **206** on inquiry card.

Electyme Motor Prods.
Fairbanks, Morse & Co.
Fairchild Camera
Fairchild Industries
Ford Instr. Co.
GM Labs.
General Control Co.
GE, Apparatus Sales
GE Clock & Timer Dept.
General Motors, Delco Div.
Genisco, Inc.
Giannini, G. M.
Gleason-Avery
Globe Industries, Inc
Gordon Enterprises
Hagen Mfg. Co.
Hansen Mfg. Co.
Hathaway & Assocs
Haydon Co., A. W.
Haydon Mfg. Co.
Holtzer-Cabot
Howard Industries
Induction Motors Corp.
Instr. Mortors Co.
International Register
Inet-Palmer Div.
Kato Engrg.
Kearfott Co.
Kollsman Instr. Corp.
Kurman Elect. Corp.
Lamb Electric
Lear, Inc.
Lectronic Research Labs.
Luther Mfg. Co.
Master Electric Co.
Merkle-Korff
Minneapolis-Honeywell
  Boston Div.
Muirhead Instrument
Norden-Ketay Corp.
Mission-Western
Motordyne Inc.
National Pneumatic Co.
Oster Mfg.
PM Industries
Paragon Electric
Peerless Electric
Precision Mfg. Co.
Robbins & Myers
Rotating Components
Sangamo Electric
Scovill Mfg. Co.
Servomechanisms, Inc.
Siemon Engrg. Co.
Small Motors, Inc.
Speedway Mfg. Co.
Sperry Gyroscope
Summers Gyroscope
Syntorque, Inc.
Systems Analyzer Corp.
Task Corp.
Technical Electronics
Thermador Electrical
Times Facsimile Corp.
Vocaline Co. of Amer.
Western Gear Corp.
Westinghouse Electric

MOTORS, Torque

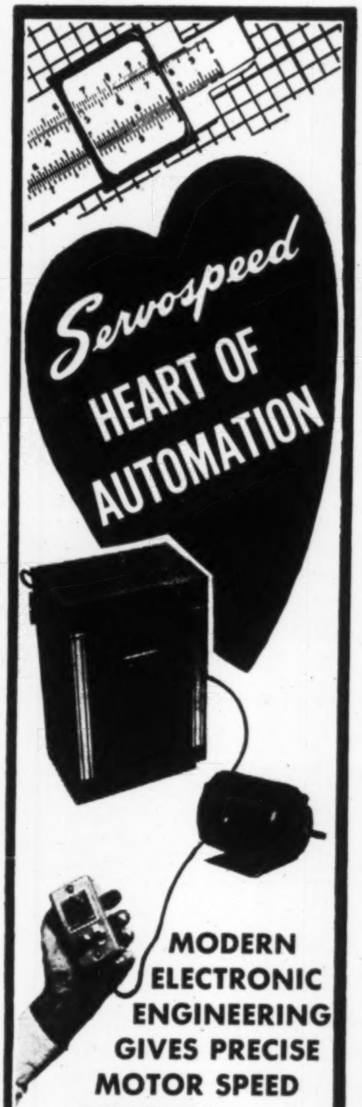
Air Marine Motors
Alliance Mfg.
Ashland Elect. Prods.
Atchley, Inc.
Barber-Colman
Bekey Electric
Bendix, Eclipse-Pioneer
Bodine Electric
Cedar Engrg., Inc.
Control Components Co.
Dalmotor Co.
Diehl Mfg. Co.
Doerr Elect. Corp.
Eastern Air Devices
Elect. Indicator Co.
Electric Spec. Co.
Electronic Communication
Fairbanks, Morse, & Co.
Fasco Industries
Ford Instr. Co.
General Industries
General Motors, Delco Div.
Giannini, G. M.
Globe Industries
Haydon Co., A. W.
Haydon Mfg. Co.
Holtzer-Cabot
Howard Industries
Induction Motors Corp.
Instrument Motors
Kearfott Co., Inc.
Kollsman Instr. Co.
Lamb Electric
Lear, Inc.
Luther Mfg. Co.
Master Electric
Merkle Korff
Motordyne Inc.
National Pneumatic Co.
Ohio Elect. Mfg. Co.
Oster Mfg.
Retron Corp.
Robbins & Myers
Rotating Components
Scruggs Co., Loyd
Servomechanisms, Inc.
Servo-Tek Prods.
Siemon Engrg. Co.
Small Motors Inc.
Syntorque, Inc.
Task Corp.
Technical Electronics Corp.
U. S. Electcl. Motors, Inc.
WacLine, Inc.
Western Gear Corp.
Westinghouse Electric

MOTORS, Unidirectional, Small, AC

Air Marine Motors
Alliance Mfg.
Amer. Electronics
Ashland Elect. Prods. Co.
Barber-Colman
Bekey Electric
Bendix Aviation Corp.
Bodine Electric
Cedar Engrg., Inc.
Cramer Controls Corp.
Cyclohm Div.
Dalmotor Corp.
Diehl Mfg. Co.
Doerr Electric
Eastern Air Devices
Elect. Indicator Co.
Electric Spec. Co.
Electro Engrg. Prod.
Electronic Communication
Fairchild Industries
Fasco Industries
Fidelity Elect. Co.
Ford Instr. Co.
G. M. Labs., Inc.
GE, Apparatus Sales
GE Clock & Timer Dept.
General Industries
General Motors, Delco Div
Giannini, G. M.
Gleason-Avery, Inc.
Globe Industries
Haydon Co., A. W.
Haydon Mfg. Co.
Heinze Electric
Holtzer-Cabot
Howard Industries
Induction Motors Corp.
Instrument Motors
Kearfott Co., Inc.
Lamb Electric
Luther Mfg. Co.
Merkle-Korff
Motordyne Inc.
National Pneumatic Co.
Oster Mfg.
Potter & Brumfield
Precise Products, Inc.
Precision Mfg. Co.
Redmond Co.
Rotating Components
Sangamo Electric Co.
Scruggs Co., Loyd
Servomechanisms, Inc.
Servo-Tek Prods.
Siemon Engrg. Co.
Small Motors, Inc.
Speedway Mfg. Co.
Syntorque, Inc.
Task Corp.
Thermador Electcl. Mfg.
U. S. Electr. Motors
WacLine, Inc.
Wagner Electric Corp.
Western Gear Corp.

MOUNTINGS, Shock and Vibration Absorbing

Acushnet Process Co.
Aerolite Electronics
Amer. Mach. & Foundry
Armstrong Cork
Atlantic India Rubber
Automatic Electric
Barry Controls
Breeze Corporations
Eberbach Corp.
Fasco Industries
Federal Shock Mt. Corp.
Felt Products
Finn & Co., T. R.



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Goodrich Co., B. F.
Goodyear Tire
Goshen Rubber
Graton & Knight
Howard Industries
Insuline Corp. of Amer.
Karp Metal Prods.
Lewyt Corp.
Lord Mfg. Co.
M. B. Mfg. Co.
PIC Design Corp.
Pneumafil Corp.
Raybestos-Manhattan
Remler Company
Robbinson Aviation Inc.
Sponge Rubber Prods.
Stricker-Brunhuber
Suffolk Products
Tinnerman Products
U. S. Rubber Co.
Vibration Mountings, Inc.

MOUNTS, **Thermistor, see Thermistor Mountings**

MOVEMENTS, **Electric, Chart, see Clockworks, also Servomotor, also Motors**

MOVEMENTS, **Gage, see Pressure Gage Movements**

MUD ANALYSIS INSTRUMENTS

Applied Research Labs.
Braun Corp.
Chemalloy Electronics
Consol. Electrodynamics
Forro Scientific
G. M. Mfg. Co.
Johnson-Williams
Mine Safety Appliances
Perkin-Elmer
R. K. L. Valve & Mfg. Co.

MUD SCALES, **see Weighing Scales**

MULLENTESTERS, **see Bursting Test Machines**

MULTIMETERS, **see Volt-ohmmeter**

MULTIPLE RECORDING INDICATORS, **see Recorders, Multipoint**

MULTIPLE SCALE METERS, **see Electrical Indicators**

MULTIPLIERS, **including High Voltage**

Avion Instr. Corp.
Ballantine Labs.
Berkeley Scientific
Chicago Indust. Instr.
Computer Engrg. Assocs.
Daven Co.
Dittmore & Freimuth
Donner Scientific
Electronic Instrument
Electro-Tech Equipt. Co
Epsco, Inc.
Feedback Controls
Feiler Engrg.
GE, Apparatus Sales
General Electronic
Goodyear Aircraft
Industrial Test Equipt
Instrument Resistors, Inc.
International Resistance
Keithley Instrs., Inc.
Mid-Century Instrumatic
Norden-Ketay
Peschel Electronics
Philbrick Researches
Phoenix Prec. Inst.
Physics Res. Labs.
Precision Apparatus Co.
Precision Resistor Co.
Radio City Products
Reeves Instr. Co.
Reiner Electronics
Resistance Prod.
Sensitive Res. Instr.
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Shallcross Mfg. Co.
Simpson Electric
Universal Transistor
Westinghouse Electric
Weston Electcl. Instr.

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Allied Engraving
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Amer Laubscher Corp.
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Atlas E-E Corp.
Bastian Bros. Co.
Brady Co., W. H.
C and H Supply Co.
Can. Rad. & Uran.
Cast Optics
Chicago-Thrift Etching
Conn-Craft Co.
Continental-Diamond Fibre
Corbin Cabinet Lock Co.
Croname, Inc.
Dietz Co., Henry G.
Dura Plastics
Eastern Etching
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Etched Prods. Corp.
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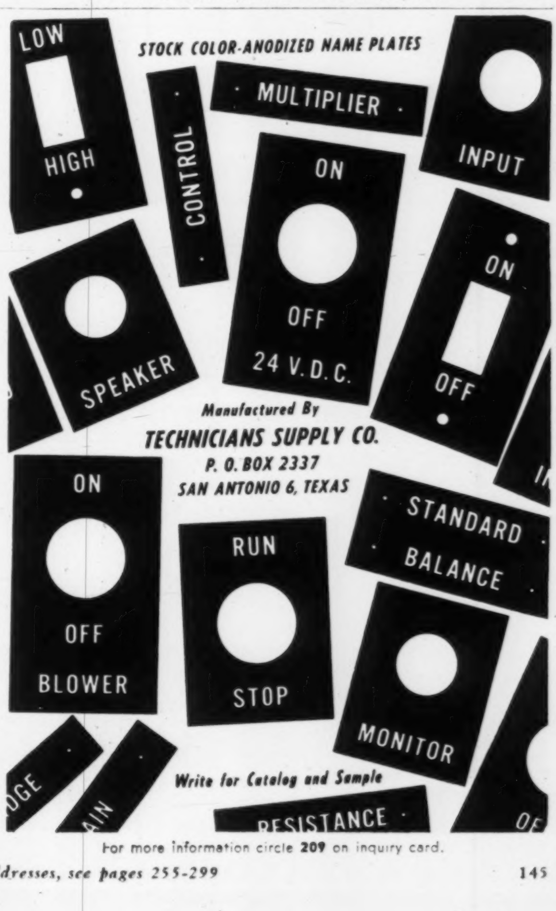

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Insuline Corp.
Internat. Decalcomania
Jarco Services, Inc.
Lake Erie Electric
Lancaster Glass
Maryland Etching Co.
Maymer Corp.
Meriam Instr. Co.
Meyercord Co.
Mica Insulator
Miller Dial & Name Pl.
National Decalcomania
Nelson Electric Mfg.
North Shore Nameplate
Ohio Carbon Co.
Palos Optical
Parisian Novelty Co.
Park Nameplate Co.
Photo Chemical Prods.
Photoplating Co.
Premier Metal Etching
Printloid, Inc.
Renick Co., L. C.
Res. Appliance Co.
Richardson Co.
Sampson Chem. & Pig.
Sandy Mfg. Co.
Scient. Inst. Dev. Lab.
Secon Metals Corp.
Sillcocks-Miller
Swanson Engrg.
Tablet & Ticket Co.
Techniques
Topflight Tape Co.
U. S. Radium
Waterbury Cos., Inc.

NATURAL SCIENCE SUPPLIES

Central Scientific
G. M. Mfg. Co.
Instrumentation Assoc.
N. Y. Scient. Supply Co.
Nucleonic Co. of Amer.
Testa Mfg. Co.
Welch Mfg. Co., W. M.

NAVAL INSTRUMENTS, see Marine Instruments

NAVIGATION AIDS, Aircraft, including Loran, Ranges, Shoran, etc. (see also Compasses, also Radar, also Radiosondes)

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Airborne Insts. Lab.
Aircraft Electronics
Aircraft Radio Corp.
Alden Electronic
Amer. Electroneering
Amer. Mach. & Foundry
Arma Corp.
Arma Div.
Austin Co.
Autoflight Instr. Div.
Autonetics Div.
Avion Div.
Bausch & Lomb
Belock Instr.
Bendix, Eclipse-Pioneer
Benson-Lehner
Bendix Aviation Corp.
Bliss & Co.
Boes Co., W. W.
Borg Equipt. Div.
Bruno-N. Y. Indus.
Burton Mfg.
Canoga Corp.
Century Geophysical
Collins Radio
Cook Electric
Cubic Corp.
Daystrom Instrument
Datran Electronics
DeJur-Amsco
Donner Scientific
Dusenbery Co.
Eastern Specialty Co.
Eclipse-Pioneer Div.
Edin Electronics
Electronic Associates
Elgin Natl. Watch
Ercona Corp.
Farrand Optical
Fecker, Inc.
Federal Telephone & Radio
Fischer & Porter Co.
Fish-Schurman
Flight Res. Engrg. Co.
Ford Instr. Co.
Gadgets, Inc.
Gaertner Scientific
Garlynn Engrg. Co.
General Precision
Genl. Prec. Lab.
Genisco Inc.
Gerber Scientific
Giannini & Co.
Globe Industries
Goodyear Aircraft
Gordon Enterprises
Gurley, W. & L. E.
Hand & Sons
Hanson-Gorrill-Brian
Harvey-Well Electronics
Hastings-Raydist
Hathaway Instr. Co.
Heiland Div.
Hickok Electcl. Instr.
Humphrey Inc.
Hycon Electronics, Inc.
Impact Register
Instr. Associates
Inst. Corp. of Fla.
Internat. Devel. Co.
Jacobs Instr. Co.
Jaeger Watch
Jardur Import
Jarvis Electronics
Kearfott Co.
Kemlitt Labs.
Keuffel & Esser
Kollmorgen Optical
Kollsman Instr. Co.
Lab-Tronics
Land-Air, Inc.
Lear, Inc.
Leupold & Stevens
Librascope, Inc.
Lindly & Co.
Link Aviation
Magnavox Co.
Marion Electcl. Instr.
Marine Compass Co.
Martin-Hubbard
Maxson Corp.
Meyer-Opticraft
Mid-Century Instrumatic
Minneapolis-Honeywell,
  Boston Div.
Moisture Register Co.
National Co., Inc.
Natl. Aircraft Corp.
Negus, T. S. & J. D.
Norden-Ketay
Pacific Scientific
Packard Bell-Electrns.
Parsons Co., Ralph M.
Penn Optical & Instr.
Pitometer Log Corp.
Polarad Electronics
Radiation, Inc.
RCA Div.
Radio Receptor Co.
Reeves Instr. Corp.
Ritchie & Son
Roller-Smith
Seismograph Serv. Corp.
Servo Corp. of Amer.
Servomechanisms, Inc.
Servonic Instr. Inc.
Servonics, Inc.
Simmonds Access.
Sperry Gyroscope
Square D Co.
Standard Prods. Inc.
Stavid Engrg., Inc.
Summers Gyroscope
Techno Instr. Co.
Ten Bosch Inc.
Testing Machines Inc.
Thwing-Albert
Transval Engrg., Corp.
Triplett Electcl. Instr.
Unertl Optical
Union Switch & Signal
U. S. Gauge Div.
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Vectron, Inc.
Wakmann Watch Co.
Wallace & Tiernan, Inc.
Wang Labs.
Warren-Knight
Westinghouse Electric
Weston Electcl. Instr.
White Co., David
Wollensak Optical
Zeiss, Inc., Carl

NAVIGATION AIDS, Marine, including Loran, Shoran, etc. (see also Compasses, also Radar, also Radiosondes)

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Amer. Mach. & Foundry
Arma Div.
Autonetics Div.
Bendix Aviation Corp.
Fed. Telephone & Radio
Fisher Research Lab.
Ford Instr. Co.
Hastings-Raydist
Inst. Corp. of Fla.
Kemlite Labs.
Munston Mfg. & Service
National Co.
Norden-Ketay
Remler Company
Pitometer Log Corp.
Polarad Electronics
Radio Receptor Co.
Reeves Instr. Corp.
Seismograph Serv. Corp.
Servionics, Inc.
Simpson Electric
Stavid Engrg., Inc.
Wallace & Tiernan
Westinghouse Electric

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Alden Electronic
Alden Products
Alpha Instr. Co.
Amer. Electroneering
Amer. Hydromath Corp.
Arma Corp.
Autonetics Div.
Avion Div.
Baker Compass Co.
Bausch & Lomb
Bendix, Eclipse-Pioneer
Bliss & Co.
Boes Co., W. W.
Bray Optical
Bronoptics Co.
Burton Mfg. Co.
Collins Radio Co.
Daystrom Instrument
Dietzgen Co., Eugene
Dusenbery Co.
Eastern Specialty Co.
Edmund Scientific
Elgin Natl. Watch
Fairchild Camera
Farnsworth Electronics
Fecker, Inc.
Flight Research
Ford Instr. Co.
Genl. Prec. Lab.
Gerber Scientific
Hamilton Watch
Hand & Sons
Hastings-Raydist
Heiland Div.
Helio Instr. Co.
Henschel Corp.
Instrumaster Industries
Kaar Engrg. Co.
Kearfott Co.
Keuffel & Esser
Kollsman Instr. Co.
Lear, Inc.
Leupold & Stevens
Link Aviation
Lyndly & Co.
Lyon Co., W. D.
Marine Compass Co.
Marion Electcl. Instr.
Martin-Hubbard
Minneapolis-Honeywell,
  Boston Div.
Negus, T. S. & J. D.
Norden-Ketay
Opplem Co.
RCA
Raytheon Mfg. Co.
Ritchie & Son
Servo Corp.
Sperry Gyroscope
Stafford Co.
Sterling Prec. Instr.
Summers Gyroscope
Suverkrop Instruments
Testa Mfg. Co.
Triplett Electcl. Instr.
Unertl Optical
Union Switch & Signal
Vectron, Inc.
Wakmann Watch Co.
Warren-Knight
Weston Electcl. Instr.
White Co.

NEEDLES, Dip

Darley & Co., W. S.
Dusenbery Co.
Fisher Research Lab.
Garlynn Engrg. Co.
Gurley, W. & L. E.
Marine Compass Co.
Municipal Instr. Co.
Ruska Instruments

NEEDLES, Gillmore

Amer. Instr. Co.
Central Scientific
Fisher Scientific
Humboldt Mfg. Co.
Olsen Testing Machine
Precision Scientific
Riehle Div.
Soltest, Inc.

NEEDLES, PENETRATION, see Asphalt Testing

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Amer. Instr. Co.
Central Scientific
Fisher Scientific
Humboldt Mfg. Co.
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Soiltest, Inc.

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Bristol Co.
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Coleman Insts.
Ercona Corp.
Fisher Scientific
Hellige, Inc.
Instrumentation Assoc.
Klett Mfg. Co.
Leitz, Inc.
Photovolt Corp.
Rubicon Co.
Zeiss, Inc., Carl

NESSLER TUBES, see Tubes, Nessler

NETWORK ANALYZERS, Electric

Clegg Labs., Inc.
GE, Apparatus Sales
I.T.E. Circuit Breaker
Northam Electronics
Standard Elec. Time
System Analyzer Corp.

NETWORKS, Matching

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Aerovox Corp.
Airpax Products
All-Tronics, Inc.
Axel Brothers
Bellmore Gear
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Dale Products
Dietz Design & Mfg.
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Electronic Spec. Co.
Empire State Prods.
Hycor Div.
Interelectronics Corp.
Gudeman Co.
Microphase Corp.
Shallcross Mfg. Co.
Southern Elects. Corp.
United Transf. Corp.
WacLine, Inc.

NETWORKS, Plug-in, see Circuits and Components, Plug-in

NETWORKS, Printed, Etched, Graphic, see Circuits, Graphic, Printed Electric

NETWORKS, Pulse Forming

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Airpax Products
All-Tronics, Inc.
Axel Brothers
Bellmore Gear
Carad Corp.
Centralab Div.
Communications Access. Co.
Computer Control Co.
Dietz Design & Mfg.
Dilectron Div.
ESC Corp.
Electro-Pulse, Inc.
Electronic Spec. Co.
Empire State Labs.
F-R Machine
Farnsworth Electronics
Ferranti Electric
Filtron Co., Inc.
GE
General Radio
Gudeman Co.
Magnetic Res. Corp.
Micamold Electronics
Millen Mfg. Co.
NJE Corp.
PCA Electronics
Sprague Electric
Texas Insts., Inc.
Tobe Deutschmann Corp.
Wheeler Insul. Wire, Inc.

NEUTRON SOURCES

Amer. Electronics
Cook Electric
GE Apparatus Sales
Jordan Electronics
Nuclear Corp. of Amer.
United Engineers, Inc.
U. S. Radium

NITROGEN DETERMINATION APPARATUS, see Gas Analyzers, Nitrogen

NOISE ANALYZING INSTRUMENTS, see Sound

NOISE FILTERS, see also Filters

Aerovox Corp.
Airborne Access. Corp.
Airborne Instruments
AiResearch Mfg.
Airpax Products
All-Tronics, Inc.
Allen-Bradley
Amer. Communications
Arnold Magnetics Co.
Balco Res. Labs.
Brush Electronics
C.G.S. Labs.
Centralab Div.
Cornell Dubilier
Dietz Design & Mfg.
Electro Products Labs.
Electronic Specialty Co.
Empire Devices, Inc.
Farnsworth Electronics
Fast Co., John E.
Filtron Co., Inc.
Gudeman Co.
Hopkins Engrg. Co.
Industrial Condenser
Insuline Corp. of Amer.
Kay Electric
Kellogg Switchboard
Lenkurt Electric
Pacific Instr. Co.
Mallory & Co., P. R.
Micamold Electronics
Mine Safety Appliances
Munston Mfg. & Service
Pacific Instrument
Packard Bell-Electrns.
Potter Co.
Schrader's Son, A.
Scott, Inc., Hermon Hosmer
Sprague Electric Co.
Standard Electronics Co.
Superex Electronics Corp.
Technology Instrument
Texas Insts., Inc.
Thordarson Electric
Tobe Deutschmann Corp.
Transaval Engrg. Corp.
U. S. Electronic Co.
United Transf. Corp.

NOZZLES, Flow, see Flow Nozzles

NUCLEAR MEASURING DEVICES, see Radioactivity Instruments

NULL DETECTORS, Electrical

Amer. Electroneering
Amer. Mach. & Foundry
Assembly Products
Austin Co.
Authorized Mfrs. Service
Automation Prods., Inc.
Ballantine Labs.
Barnes Devel. Co.
Boone Instr.
Borden Engrg. Div.
Bristol Co.
Brown Electro-Meas.
Bruno-N. Y. Indus.
Cal-Tronics Corp.
Computer Co. of Amer.
Curtiss-Wright
Deltron, Inc.
Desco Mfg. Co.
Dittmore & Freimuth
Donner Scientific
Electro Measmts., Inc.
Federal Telephone & Radio
Feiler Engrg. Co.
Fielden Instr. Div.
Freed Transf. Co.
GE
Genl. Physical Lab.
General Radio
H D Electric
Hagan Chem. & Controls
Hanson-Gorrill-Brian
Hewlett-Packard
Hycon Electronics, Inc.
Ideal Industries
Industrial Control Co.
Industrial Instruments
Indust. Test Equipt. Co.
Kahn & Co.
Keithley Instrs., Inc.
Kin Tel
Knopp, Inc.
Landsverk Electrometer
Leeds & Northrup
Magnetic Instr. Co.
Magnetic Res. Corp.
Marion Electcl. Instr.
Millitest Co.
Millivac Instr. Co.
Minneapolis-Honeywell
  Boston Div.
Mt. Sopris Instr. Co.
Muirhead Instrument
Ohmart Corp.
Pacific Instr. Co.
Peschel Electronics
Phoastron Co.
Phoenix Prec. Instr.
Physics Res. Labs.
Pimex, Inc.
Polytechnic Res. & Dev.
RCA
Rockwell Engrg. Co.
Rubicon Co.
Scott, Inc., Herman Hosmer
Sensitive Res. Instr.
Shallcross Mfg.
Sherron Metallic
Std. Electronic Res.
Thordarson-Meissner
Trio Labs., Inc.
Virginia Electronics
Waters Mfg.
Westinghouse Electric

NUMBER DISCS, for Counters, Indicators, etc.

Acromark Co.
Allied Engraving
Amer. Emblem Co.
Amer. Laubscher
Anderson & Sons
Carroll Co., J. B.
Chicago Thrift-Etching
Conn-Craft
Etched Prods. Corp.
Felsenthal & Sons
Force & Co., Wm. A.
Grammes & Sons
Hupp Instrumentation
Mica Insulator
Moss & Co.
O'Hara Waltham Mfg.
Sillcocks-Miller
Smith Mach. Co., H. A.
Spaulding Fibre Co.
Techniques Inc.
Veeder-Root
Waterbury Co's.

OCEANOGRAPHIC INSTRUMENTS and EQUIPMENT

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Askania-Werke, A. G.
Atlantic Research Corp.
Bristol Co.
Brush Electronics
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Gorrell & Gorrell
H-B Instr. Co.
Kahl Scient. Instr.
Leeds & Northrup
Leupold & Stevens
Non-Linear Systems
Penn Optical & Instr.
Raytheon Mfg.
Southw. Ind. Electronics
Victory Engrg. Corp.
Wallace & Tiernan

OCTANTS, NAVIGATING, see Navigational Instruments

ODOMETERS

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Engler Instr. Co.
Hycon Electronics
Jones Motrola
Kearfott Co.
Matisa Equipt. Corp
Matthews Instr. Co.
Soiltest, Inc.
Stewart-Warner
Tracktest Equipt. Co

ODOR DETECTING INSTRUMENTS

Johnson-Williams, Inc.

OHMMETERS, see Resistance Indicators

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Bellco Glass, Inc.
Corning Glass Works
Eitzen Co., Louis C.
Ercona Corp.
Fulcrum Oil Co.
Greiner Co., Emil
Greiner Glassblowing Lab.
H-B Instrument Co.
Kimble Glass Co.
Kontes Glass Co.
Martin & Co.

Moeller Instr. Co.
Owens-Illinois
Podbielniak, Inc.
Precision Scientific
Scientific Glass App.

OIL, High Vacuum

Consolidated Vacuum
Dow Corning
Eastman Kodak
Eitel-McCullough
Green Rectifier Co.
Haydu Bros.
High Vacuum Equipt.
Kinney Mfg. Div.
Lehigh Chemical Prods. Co.
Litton Industries
NRC Equip. Corp.
National Research
Optical Film Engrg.
Pancro Mirrors, Inc.
Smith Co., Arthur F.
Veeco Vacuum Corp.
Welch Mfg. Co., W. M.

OIL LUBRICATING, see Lubricants

OIL TESTING INSTRUMENTS, see Petroleum Testing Instruments

OIL WELL INSTRUMENTATION

Allied Products Div.
Amer. Kloeckner-Moeller
Automation Products
Avion Div.
Bowser, Inc.
Brooks Rotameter
Brush Electronics
Central Scientific
Century Elect. & Insts.
Coleman Instr. Co.
Fischer & Porter
Georator Corp.
Geotechnical Corp.
Heiland Div.
Industrial Instr. Corp.
Johnson-Williams
Lake Erie Electric
Lenox Instr. Co.
Mine Safety Appliances
Nelson Electric Mfg.
Nuclear Development
Oil Metering & Processing
Oil Well Water Loc. Co.
Podbielniak, Inc.
Radioactive Prods., Inc.
Rahm Instruments
Research Controls
Ruska Instr. Corp.
Seismograph Serv. Corp.
Southwest Control Co.
Southw. Indust. Electronics
Sperry-Sun Well Surveying
Trerice Co., H. O.
Victory Engrg. Corp.
Wiancko Engrg. Co.

OPACIMETERS

Amer. Instr. Co.
Bausch & Lomb
Electronic Prods Co.
Ess Instr. Co.
Gaertner Scientific
Gardner Laboratory
Instrument Devel. Labs.
Photovolt Corp.
Testing Machines, Inc.

OPERATION INDICATORS and/or RECORDERS, see Time Recorders

OPTICAL BENCHES

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Amer. Instr. Co.
Askania-Werke A. G.
Baird-Atomic
Bausch & Lomb
Bray Optical
Cambridge Instr. Co.
Central Scientific
Chicago Apparatus Co.
Curtis Labs. Inc.
Davidson Mfg.
DuMaurier Co.
Edmund Scientific
Eichner Instruments
Epic Inc.
Ercona Corp.
Fecker, Inc., J. W.
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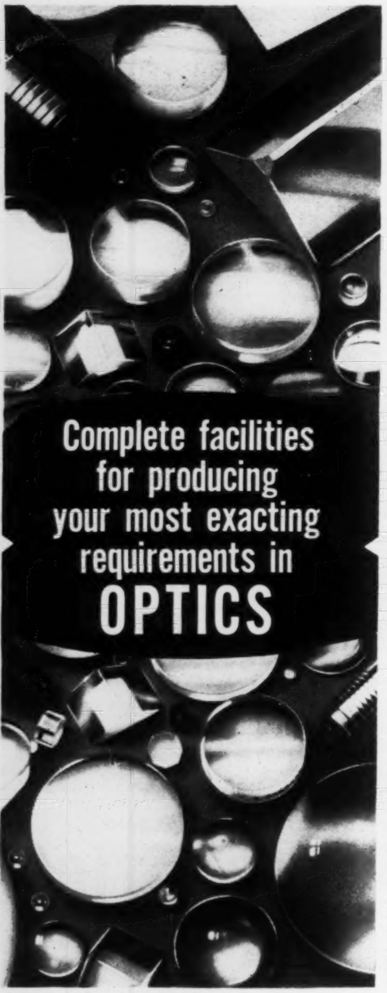

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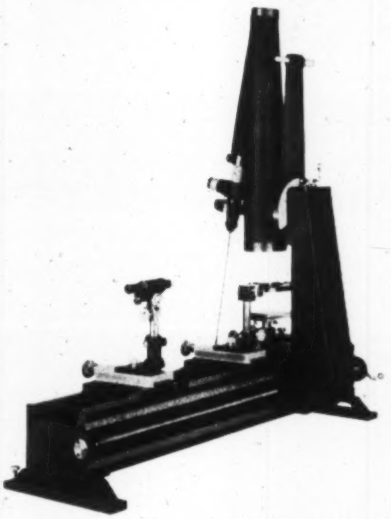

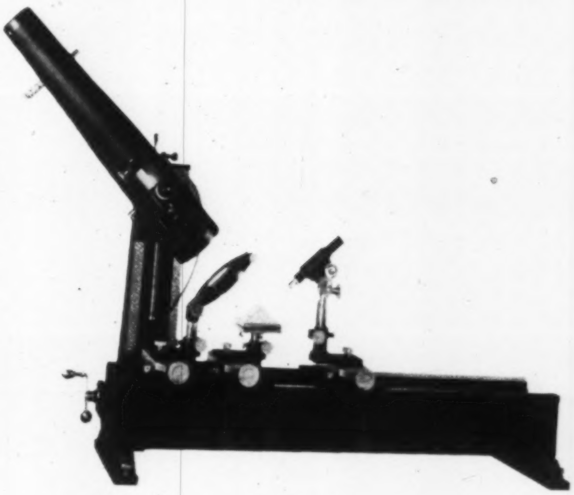

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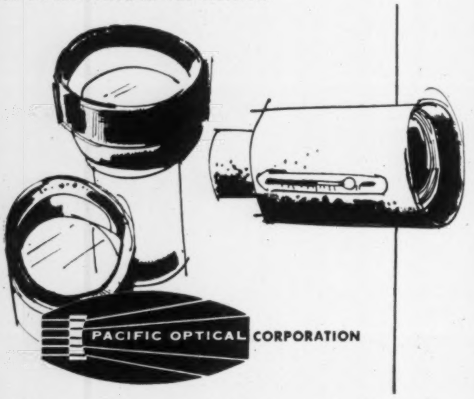

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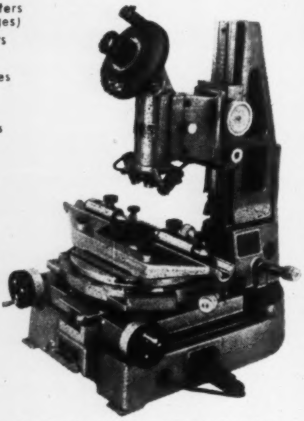

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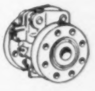

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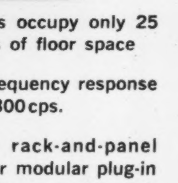

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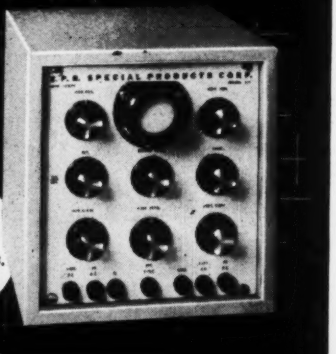

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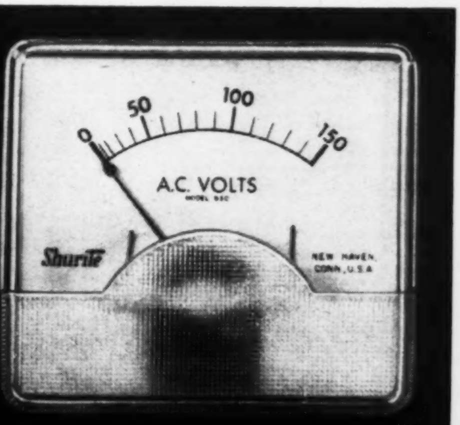

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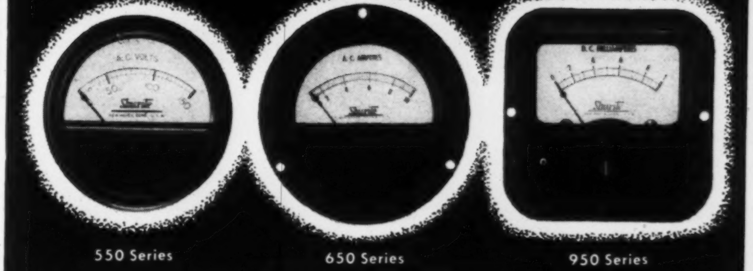

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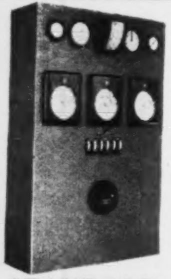

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Central Scientific
Cook Electric
Cooley Elect. Mfg.
Despatch Oven Co.
Drying Systems, Inc.
Eclipse Fuel Engrg. Co.
Electric Hotpack Co.
Falstrom Co.
Gallien, R. P.
Grieve-Hendry
Huppert Co., K. H.
Kirk & Blum
Knights Co., James
L & L Mfg. Co.
Labline, Inc.
Magnetic Amplifiers
Modern Lab. Equipt.
New England Oven Co.
Phipps & Bird
Precision Scientific
Premier Research Labs.
Temp. Engrg. Corp.
Tenney Engrg., Inc.
Testing Machines
Valpey Crystal
Young Brothers

OVENS, Testing and Aging

Amer. Gas Furnace
Amer. Instr. Co.
Auto Control Labs.
Blue M Electric
Bristol Engrg. Labs.
Bush Assoc., G. F.
Cook Eelectric
Electric Hotpack Co.
Emerson App. Co.
Fisher Scientific
Gordon Co., Claud S.
Greiner, Emil
Grieve-Hendry
Kirk & Blum
L & L Mfg. Co.
Labline, Inc.
Mid-Century Instrumatic
Modern Lab. Equipt. Co.
Natl. Appliance Co.
New England Oven Co.
Precision Scientific
Res. Appliance Co.
Rockwell Co., W. S.
Schaar & Co.
Scott Tester, Inc.
Surface Combustion Corp.
Temp. Engrg. Corp.
Tenney Engrg., Inc.
U. S. Testing Co.
Warren Bros. Mfg. C.

OVER and UNDER-WEIGHT INDICATORS FOR BEAM SCALES, see Weighing Scales

OXIDATION-REDUCTION POTENTIAL INSTRUMENTS, including Detectors

Analytical Measur., Inc.
Beckman Insts.
Bristol Co.
Coleman Instr.
Fischer & Porter
Fisher Scientific
Foxboro Co.
Mine Safety Appliances
Scientific Instr. Co.
Wallace & Tiernan

OXYGEN ANALYZERS, see Gas Analyzers

OXYGEN REGULATORS, Aircraft, including Demand Valves

AiResearch Mfg. Co.
Bastion Blessing
Bendix, Eclipse-Pioneer
Bendix, Pioneer-Central
Black Mfg.
Gadgets, Inc.
Gaertner Scientific
Grove Valve & Reg.
Keller & Co., L. H.
Linde Co.
Mine Safety Appliances
Mira Scient. Insts.
Robertshaw-Fulton

PAINT

Bakelite Corp.
Crown Indust. Prods.
Du Pont
Emerson & Cuming, Inc.
Metal & Thermit Corp.
Micro-Circuits Co.
Photo Chemical Prods.
Sherwin-Williams Co.
Stanley Works
Switzer Bros.
Tempil Corp.
Walden Electronics

PAINT, Conductive

Acheson Colloids
Centralab Div.
DuPont
Emerson & Cuming
Fineisen, A. R.
General Cement Mfg.
Handy & Harman
Micro-Circuits Co.
Photo Chemical Prods.
Radio Corp. of Amer.
Sauereisen Cement Co.
Torrance Glass & Color

PAINT, Changing Color with Temperature, see Temperature-Sensitive Paint

PAINT TEST INSTRUMENTS, including Hiding Power, Film Thickness, etc.

Amer. Instr. Co.
Applied Research Labs.
Atlas Elect. Devices Co.
Boonton Radio
Cambridge Instr. Co.
Central Scientific
Custom Scient. Insts.
Dice Co., J. W.
Dillon & Co.
Fish-Schurman
Fisher Scientific
Gardner Laboratory
GE Apparatus Sales
Greiner Glassblowing Lab.
Hellige, Inc.
Instron. Engrg. Corp.
Koehler Instr. Co.
Moore Co., H. R.
Moore Corp., John B.
Munsell Color Co.
Palos Optical Co.
Photovolt Corp.
Precision Scientific
Reiner Electronics
Scientific Instr. Co.
Scott Testers
Spellman Television
Taber Instr. Co.
Temperature Engrg.
Tenney Engrg. Co.
Thermo-Electric Co.
U. S. Testing Co., Inc.
Universal Aviation
Van Keuren Co.
Zuhr, Inc., Henry

PANELBOARDS, see Panels, also Cabinets, also Cases

PANEL LIGHTS, see Pilot Lights

PANELS, Edge Lighted

Ackerman Engravers
Acromark Co.
Allied Engraving
Bailey Meter Co.
Bodnar Industries
Can. Radium & Uranium
Carroll Co.
Conn-Craft Co.
Croname, Inc.
Dialight Corp.
Eldema Corp.
Falstrom Co.
Gustaveson, Inc.
Hays Corp.
Lancaster Glass
Maryland Etching Co.
Miller Dial & Name Pl.
Mutual Elect. Indus.
Sampson Chem. & Pigm.
Scheidl Mfg. Co.
Scientific Instr. Co.
Spartan Coach & Mfg. Co.
Spivey, Inc., James S.
Sun Dial Corp.
Swanson Engrg. Co.
Texas Apparatus Co.
U. S. Radium Corp.

PANELS, Graphic

Ackerman Engravers
Acromark Co.
Allied Engraving
Askania Reg. Co.
Askania-Werke, A. G.
Autom. Timing & Controls
B-I-F Industries
Bailey Meter Co.
Bogue Elect. Mfg. Co.
Bristol Co.
Can. Rad. & Uran.
Cleveland Metal Specs.
Control Panel Corp.
Control Specialty Corp.
Croname, Inc.
Custom Line Panel
Devco Engrg.
Dietz Co.
DuBois Engrg. & Mfg.
Falstrom Co.
Fischer & Porter Co.
Foxboro Co.
Gustaveson, Inc.
Hopp Press, Inc.
Indust. Contr. Panel Co.
Indust. Engrg. Corp.
Instrument Lab., Inc.
Johnson Service Co.
Lake Erie Electric
Machinery Electrification
Magnetic Industries
Maryland Etching Co.
Maymer Corp.
Miller Dial & Name Pl.
Minneapolis-Honewell
  Indust. Div.
Nelson Electric Mfg.
Panellit, Inc.
Penn Panel & Box Co
Photo Chemical Prods.
Renick Co., L. C.
Scientific Instr. Co.
Suffolk Prods. Corp.
Sun Dial Corp.
Swanson Engrg. Co.
Taller & Cooper
Techiques Inc.
Texas Apparatus Co.
U. S. Radium Corp.
Wolfe & Mann

PANELS, Instrument, Metal, including Cubicles, Housings

ARF Products
Abaln Prec. Mfg.
Acromark Co.
Aerolite Electronics
Alden Products
Allied Engraving
Amer. Emblem Co.
Amer. Kloeckner-Moeller
Amer. Mach. & Foundry
Anderson & Sons
Artisan Metal Works
Askania Reg. Co.
Askania-Werke, A. G.
Autom. Timing & Controls
Avion Div.
B-I-F Industries
B/W Controller
Bailey Meter Co.
Baltic Metal Prods.
Barber-Colman
Barnes Co., W. F. & J.
Berkshire Labs
Bristol Co.
Brooks & Perkins
Bud Radio, Inc.
Builders-Providence
Cal-Tronics Corp.
Can. Rad & Uran.
Chicago Thrift Etching
Churchill Lighting
Cleveland Fuel Equipt.
Columbia Metal Co.
Continental Elect-Equipt.
Control Engrg. Co.
Control Panel Corp.
Control Specialty Corp.
Cooper Co., Clark
Craig Systems, Inc.
Croname, Inc.
Custom Line Panel
Daven Co.
Devtronics, Inc.
Dittmore & Freimuth
Dietz Co., Henry G.
Dietz Design & Mfg.
DuBois Engrg. & Mfg.
Eastern Specialty Co.
Ediu Co.
Electro-Chemical Engrg.
Electro Devices (St. Louis)
Engrg. & Research Corp.
Etched Prods. Corp.
Falstrom Co.
Fischer & Porter Co.
Foxboro Co.
Gates Radio Co..
Gaydon Co.
General Control
GE Apparatus Sales
General Etching & Mfg.
General Regulator Corp.
Globe Industries, Inc.
Gold Seal Mfg. Co.
Grammes & Sons, Inc.
Guardite, Co.
Gustaveson, Inc.
Hagan Chem. & Controls
Hamner Electronics
Hays Corp
Henschel Corp.
Indust. Contr. Panel Co.
Indust. Engrg. Corp.
Instrument Lab., Inc.
Instrument Tool & Eng.
Insuline Corp. of Amer.
Johnson Co., E. F.
Kahn & Co.
Karp Metal Prods. Co.
King Engrg. Corp.
Kirk & Blum
Lake Erie Electric
Lewyt Corp.
Littleford Bros.
Magnetic Industries
Maryland Etching Co.
Mason-Neilan Div.
Maymer Corp.
Mid-Century Instrumatic
Miller Dial & Name Pl.
Minneapolis-Honeywell
  Indust. Div.
Moore Products
Moss & Co., Henry
Mullenbach Div.
Natural Gas Equipt.
Nelson Electric Mfg.
Nelson Instr. Co.
Nems-Clarke, Inc.
Newark Electric Co.
NYT Electronics
Olympic Metal Prods.
Palos Optical Co.
Panellit, Inc.
Park Nameplate Co.
Par-Metal Prods. Corp.
Patterson Co., Wayne D.
Penn Insts. Div.
Penn Panel & Box Co.
Photo Chemical Prods.
Pneumafil Corp.
Premier Metal Prods. Co.
Proportioneers, Inc.
Rapidan Mfg. Co.
Regal Plastic Co.
Regent Controls
Reiner Electronics Co.
Reliance Instr. Mfg. Corp.
Renick Co., L. C.
Riester & Thesmacher
Roller-Smith
Sampson Chem. & Pigm.
Scam Instr. Corp.
Scientific Instr. Co.
Scovill Mfg. Co.
Simplex Valve & Meter
Simpson Electric
Spaulding Fibre Co.
Spivey, Inc., James S.
Std. Elect. Time Co.
Suffolk Products
Sun Dial Corp.
Swam & Co., R.E.S.
Swanson Engrg. Co.
Taller & Cooper
Technical Soldering Co.
Teletronics Labs., Inc.
Texas Apparatus Co.
Texas Instrs., Inc.
Trerice Co.
U. S. Radium Corp.
Universal Aviation Equipt
Virginia Electronics
Walker Div.
Warren Bros. Mfg. Co
Western Lithograph Co.
Westinghouse Electric
Wheelco Instr. Div.
Wolfe & Mann
Zero Mfg. Co.

PANELS, Instrument, Plastic, including Housings

Acromark Co.
Aerolite Electronics
Allegheny Plastics
Allied Engraving
Amer. Kloeckner-Moeller
Amer. Name Plate
Amer. Phenolic Corp.
Auburn Button Wks.
Bodnar Industries
Bristol Co.
Brooks Rotameter
Can. Radium & Uranium
Carroll Co.
Cast Optics
Chicago Thrift Co.
Conn-Craft Co.
Continental-Diam. Fibre
Craig Systems, Inc.
DuBois Engrg. & Mfg.
Dura Plastic Co.
Eastern Specialty Co.
Electro-Chemicals Engrg.
Engrg. & Research Corp.
Etched Prods. Corp.
Fischer & Porter Co.
Formica Co.
GE Apparatus Sales
Globe Industries, Inc.
Grammes & Sons, Inc.
Gustaveson, Inc.
Hopp Press, Inc.
Instrument Tool & Engrg.
Insuline Corp. of Amer.
Lewyt Corp.
Maryland Etching Co.
Maymer Corp.
Mica Insulator
Miller Dial & Name Pl.
Molded Insulation Co.
Moss & Co., Henry
Mutual Elect. Indus.
National Controls
Nelson Electric Mfg.
Nelson Instr. Co.
Palos Optical Co.
Panellit, Inc.
Parisian Novelty Co.
Patterson Co., Wayne D.
Penn Panel & Box Co.
Photo Chemical Prods.
Premier Metal Prods.
Printloid, Inc.
Regal Plastic Co.
Renick Co., L. C.
Richardson Co.
Rogan Bros.
Roller-Smith
Sampson Chem. & Pigm.
Santay Corp.
Scheidl Mfg. Co.
Scientific Instr. Co.
Shallcross Controls
Sierracin, Inc.
Sillcocks-Miller Co.
Simpson Electric
Spaulding Fibre Co.
Spivey, Inc., James S.
Stricker-Brunhuber
Sun Dial Corp.
Swanson Engrg. Co.
Taller & Cooper
Texas Apparatus Co.
Texas Insts., Inc.
Universal Aviation Equipt.
U. S. Gasket Co.
U. S. Radium
Valley-National
Waldom Electronics
Walker Div.
Warrick Products
  Waterbury Co's.
Watertown Mfg. Co

PANELS, Radio Test

Adler Electronics
Allied Engraving
American Electroneering
Amer. Mach. & Foundry
Anderson & Sons
Authorized Mfrs. Service

Miniature Graphic Panel instruments for pneumatic transmission

This new system measures, indicates, records and controls pressure (5 in. water to 10,000 psi), absolute pressure (5mm mercury absolute and up), temperature, vacuum, flow, differential pressure, liquid level, and mechanical motion.

The only instrument that fully carries out the basic graphic-panel idea. Includes full plug-in-service and continuous valve position indication. There are 38 receivers and 36 controller models and the widest variety of transmitters on the market. A model is available that will exactly meet every requirement.

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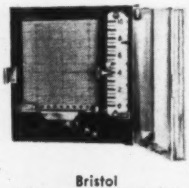

Bristol Metagraphic Recorder

BRISTOL COMPANY
112 Bristol Rd., Waterbury 20, Conn.

For more information circle **229** on inquiry card.

Baer Co., S. C.
Bruno-N. Y. Indus.
Bud Radio
Bunnell Co.
Cal-Tronics Corp.
Computer Co. of Amer.
Dietz Co., Henry G.
Electro Devices (St. Louis)
Engrg. & Research Corp.
Faltsrom Co.
Gates Radio Co.
General Electronic
Inst. Corp. of Fla.
Instr. Devel. & Mfg. Corp.
Kahn & Co.
Karp Metal Products
Lear, Inc.
Miller Dial & Name Pl.
Munston Mfg. & Service
Nems-Clarke, Inc.
Par-Metal Products
Phaostron Co.
Premier Metal Prods.
Radiaphone Co.
Reiner Electronics
Scientific Instr. Co.
Simpson Electric
Spivey, Inc., James S.
Suffolk Products
Sun Dial Corp.
Swanson Engrg. Co.
Universal Aviation
Virginia Electronics

PANELS, Weatherproof Housing

Allied Engraving
Amer. Kloeckner-Moeller
Amer. Machine & Foundry
B-I-F Industries
B/W Controller
Bailey Meter Co.
Bristol Co.
Control Panel Corp.
Control Specialty Corp.
Craig Systems, Inc.
Dittmore & Freimuth
Du Bois Engrg. & Mfg.
Engrg. & Research Corp.
Falstrom Co.
Fischer & Porter Co.
Gates Radio Co.
Gustaveson, Inc.
Indust. Engrg. Corp
Kin-Tel
Keller Products
Lake Erie Electric
Mercoid Corp.
Nelson Electric Co.
Rapidan Mfg. Co.
Regal Plastic Co.
Reiner Electronics
Scientific Instr. Co.
Suffolk Products
Swanson Engrg. Co.
Texas Apparatus Co.
Warren Bros. Mfg. Co.
Wolfe & Mann

PANORAMIC ADAPTERS, see Spectrum Analyzers

PANTOGRAPHS

Allied Engraving
Dietzgen Co.
Dittmore & Freimuth
Gaertner Scientific
Gordon Enterprises
Gorton Mach. Co., George
Green Instr. Co.
Instruments Corp.
Jerpbak-Bayless
Keuffel & Esser
Los Angeles Scient. Instr.
Mico Instr. Co.
New Hermes, Inc.
Newmatic Corp.
Physics Research
Preis Engraving Mach.
Speidel & Co.
Warren-Knight
Weber Co.

PAPER, Graphic Recording, see Charts

PAPER and PULP TESTING MACHINES and INSTRUMENTS, including Folding Endurance, Stiffness, Tearing, also Gummed Tape

Allegany Instr. Co.
Amer. Instr. Co.
Amthor Testing
Atlas Elect. Devices
Atmosphere Control
Baldwin-Lima-Hamilton
Bausch & Lomb
Brown & Sharpe Mfg.
Bush Assoc. G. F.
Cary & Co.
Central Scientific
Custom Scient. Insts.
Devtronics, Inc.
Dietert Co.
Dillon & Co.
Emerson Apparatus Co.
Federal Prods. Corp.
Ferner Co.
Fielden Instr. Div.
Fuess, Inc.
GE
Gardner Laboratory
Greiner, Emil
Gurley, W. & L. E.
Hacker & Co., W. J.
Hart Moisture Gage
Hygrotester, Inc.
Instron Engrg. Corp.
Labline, Inc.
Laboratory Equipt.
Meyer Opticraft
Olsen Testing Machine
Palo Lab Supplies
Perkins & Son
Photovolt Corp.
Precision Scientific
QOS Corp.
Riehle Div.
Scott Co., Henry L.
Scott Testers, Inc.
Sheffield Corp.
Speidel & Co.
Steel City Testing
Süter, Alfred
Sweets Co., Martin
Taber Instr. Co.
Testing Machines, Inc.
Thwing-Albert
Toledo Scale Co.
U. S. Testing Co.
Van Keuren Co.
Williams Apparatus Co.

PARAFFIN and/or PITCH TESTERS

Amer. Instr. Co.
Apex Scientific
Chatillon & Sons
Chicago Surgical & Elect.
Humboldt Mfg. Co.
Jerpbak-Bayless
Koehler Instr. Co.
Labline, Inc.
Olsen Testing Mach.
Perkins & Son
Precision Scientific

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For more information circle 230 on inquiry card.

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ON
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CLOSE
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NEW HERMES
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Chip-proof PLASTIC LEGEND PLATES

engrave them yourself

Tough **GRAVOFLEX** blanks are laminated in sharp contrast colors. No need to keep large inventory—all sizes, varied colors available on short notice. Low-cost GRAVOFLEX legend plates stand *up* better, stand *out* better!

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- Spindle speeds up to 26,000 rpm to engrave or for machining modern materials
- Fastest possible copy set-up
- Greatest ease and speed of adjustments
- Cutter grinders, rotary tables, master letters, compound slides, name plate blanks and all required accessories

MODEL D2 HEAVY-DUTY
2-DIMENSIONAL

- 575 pounds-rigid, sturdy, precise
- Vertical adjustment of copy table automatic with Pantograph
- Unobstructed on three sides to take large work
- Vertical range over 10 inches
- Micrometer adjustment for depth of cut
- Ball bearing construction throughout — super precision ball bearings in spindle
- Ratios 2 to 1 to infinity — master copy area 26" x 10"

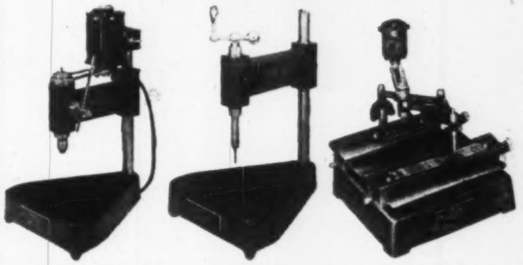
MODEL 106 PORTABLE BENCH MODEL-
2- OR 3-DIMENSIONAL

- 40 pounds of unbeatable speed and accuracy at a reasonable price
- Perfect for all machining applications within its range
- Ball bearing spindle has three speeds up to 14,000 rpm
- 5 positive, accurate pantograph ratios
- One copy carrier (supplied) accepts all master sizes
- Height of pantograph and position of cutter are continuously adjustable
- Work up to 10" by any width
- Taper shank cutters

GREEN INSTRUMENT CO., INC.
383A Putnam Avenue Cambridge, Mass.

For more information circle 231 on inquiry card.

"PACKAGE" MACHINE SHOP
For Small Precision Work



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TAPPER— For Small-Hole Tapping Work. Reduces Tap Breakage, Saves Time.
Spindle, With Built-in Tap Chuck, Instantly Removed.
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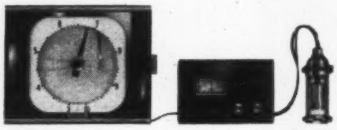
MICO INSTRUMENT COMPANY
86 Trowbridge St. Cambridge 38, Mass.

For more information circle 233 on inquiry card.

When Using This Guide look under the variable, e.g., Pressure Gages (not Gages, Pressure); or look under the noun—Magnets, Permanent (not Permanent Magnets).

pH Automatic Controllers and Recorders

Bristol makes a very wide variety of pH Automatic Controllers and Recorders in round- and strip-chart models. The application of pH instruments in industry was pioneered by Bristol nearly 20 years ago. Thousands of Bristol pH Controllers and recorders are in use today in almost every industry. They are known for their high accuracy and rugged construction. Complete information on models offered and method of application is given in 36-page bulletin Q1304. Write for copy.



BRISTOL COMPANY 112 Bristol Rd., Waterbury 20, Conn.

For more information circle **235** on inquiry card.

Temperature Engrg.
Thwing-Albert
Weston Electcl. Instr.

PARTICLE INSTRUMENTS, including Particle Size (see also Air Particle)

Amer. Instr. Co.
Amer. Mach. & Foundry
Bausch & Lomb
Bush Assoc. G. F.
Central Scientific Co.
DuMont Labs., Allen B.
Fed. Pneumatic Systems
Ferner Co , R. Y.
Fisher Scientific
Franklin Electronics
GE, Apparatus Sales
LaPine & Co.
Meyer & Co., Hugo
Mine Safety Appliances
Northam Electronics
Opplem Co., Inc.
Palo Lab. Supplies
Phoenix Prec. Instr.
Precision Scientific
Weber Gage Co.

PASSOMETERS

Ercona Corp.
Keuffel & Esser
Weber Co.
Zeiss, Inc., Carl

PEDOMETERS

Dietzgen Co.
Keuffel & Esser
Warren-Knight
Weber Co.
White Co., David

PELLET PRESSES, see Machines, Presses, Pellet

PELORUSES

Arma Corp.
Bliss & Co.
Hand & Sons
Keuffel & Esser
Laboratory Specialties
Leupold & Stevens
Marine Compass Co.
Meyer-Opticraft
Negus T. S. & J. D
Pioneer Instr. Co.
Prec. Thermom. & Insts.
SperryGyroscope
Stafford Co.
Thwing-Albert
Warren-Knight

PENDULUM MACHINES, see Impact Test

PENETROMETER NEEDLES, see Asphalt Testing Apparatus

PENS, Recorder, see Recorder Pens

PERISCOPES, Industrial and Smoke

Align-A-Scope Inc.
Amer. Optical Co.
Bronoptics Co.
Buhl Optical
Davidson Mfg.
Ess Instr Co.
Fecker, Inc.
Gaertner Scient. Corp.
Helio Instr. Co.
Kollmorgen Optical
Lab. Optical Co.
Lenox Instr. Co.
McNeill Engrg. Co.
National Elect. Instr.
Palos Optical Co.
Penberthy Instr. Co.
Perkin-Elmer
Schneider-Cogswell, Inc.
Testa Mfg. Co.
Tinsley Labs.
Unertl Optical
Zenith Optical

PERISCOPES, Military and Naval

Align-A-Scope Inc.
Amer. Optical Co.
Bausch & Lomb
Belock Instr.
Bray Optical
Bronoptics Co.
Buchele, W.
Buhl Optical
Burton Mfg. Co.
Curtis Labs. Inc.
Davidson Mfg. Co.
Edmund Scientific
Farrand Optical
Fecker, Inc.
Gaertner Scientific
Gordon Enterprises
Helio Instr. Co.
Keuffel & Esser
Kollmorgen Optical
Kollsman Instr. Corp.
Lenox Instr. Co.
Librascope, Inc.
Norden-Ketay
Northrop Anaheim
Opplem Co.
Owens-Illinois
Palos Optical Co.
Penn Optical & Instr.
Perkin-Elmer
Schneider-Cogswell, Inc.
Topp Industries
Unertl Optical
Wild Heerbrugg
Zenith Optical

PERMANENT MAGNETS, see Magnets

PERMANENT-MAGNET MOVING-COIL MOVEMENTS, see D'Arsonval Movements

PERMEAMETERS, Magnetic

Aero Electronics
Annis Co.
Brownell, H. Russell
Cambridge Instr. Co.
Fisher Scientific
GE
Hathaway Instr. Co
Leeds & Northrup
Rawson Electcl. Instr.
Rese Engrg. Co.
Rubicon Co.
Sensitive Res. Instr.
Sunshine Scientific
Welch Scientific

PERMEAMETERS, Porosity

B-I-F Industries
Cambridge Instr.
Engineering Labs., Inc.
Fisher Scientific
Gurley, W. & L. E.
Humboldt Mfg. Co.
Precision Scientific
Ruska Instr. Corp.
Sheffield Corp.
Soiltest, Inc.
Telex, Inc.
Testing Machines, Inc.
Thwing-Albert

PETROLEUM TESTING INSTRUMENTS

Alpha Corp.
Amer. Instr. Co.
Amer. Research Corp.
Apex Scientific
Applied Research Labs.
Associated Research, Inc.
Automation Prods., Inc.
Baird-Atomic
Bausch & Lomb
Blue M Electric
Boekel & Co.
Brabender Corp.
Brooks Rotameter
Brush Electronics
Central Scientific
Consol. Electrodynamics
Cook Research Labs.
Dietert Co., Harry W.
Eitzen Co., Louis C.
Ercona Corp.
Fish-Schurman
Fisher Scientific
G. M. Mfg. Co.
Gardner Laboratory
GE, Apparatus Sales
Gerin Corp.
Greiner Co., Emil
Greiner Glassblowing Lab.
Griebel Co.
H-B Instr. Co.
Hallikainen Insts.
Hellige, Inc.
Humboldt Mfg. Co.
Industrial Instr. Inc
Jarrell-Ash
Kimble Glass
Klett Mfg. Co.
Koehler Instr. Co.
Kontes Glass
Labline, Inc.
Laboratory Equipment
Mico Instr. Co.
Moeller Instr. Co.
Moisture Register Co.
Murphy & Miller
Nuclear Research
Oil Well Water Loc. Co.
Oil Metering & Processing
Parr Instr. Co.
Peschel Electronics
Photovolt Corp.
Podbielniak, Inc.
Precision Scientific
Refinery Supply
Refrigeration Syst.
Research Appliance Co.
Ruska Instr. Corp.
Ruttco Mfg. Co.
Sargent & Co.
Scientific Glass App.
Scientific Instr. Co.
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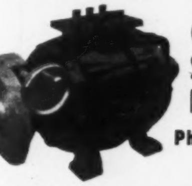

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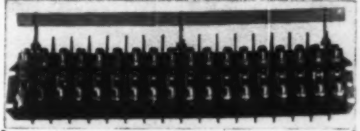

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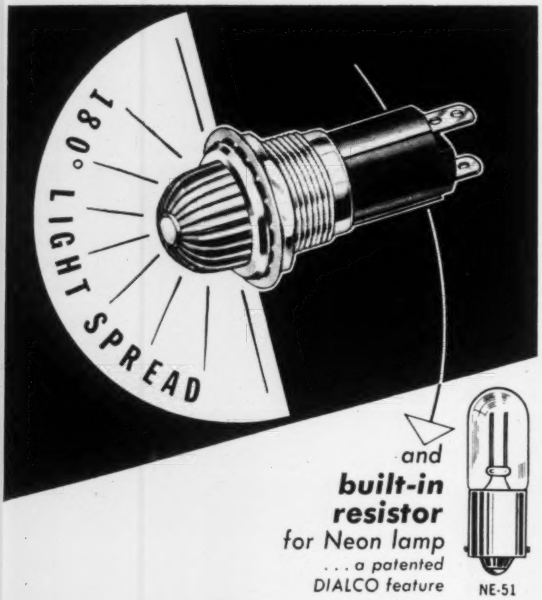

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Johnson Engrg. Co.
Keller, Jr., Hugo P.
Landis & Gyr
Meikle Mfg. Co.
Miniature Prec. Bearings
Moser Jewel Co.
New Hampshire Ball Bgs.
Parisian Novelty Co.
Permo, Inc.
Precision Mfg. Co.
Precision Products Co.
Preco Co.
Simpson Electric
Specialty Screw Mach.
Sphinx Amer. Co.
Springfield Instr. Bear.
Stafford Co.
Steel Co., Herman D.
Swiss Jewel Co.
Swissomatic Prods.
Taylor Pivot Co.
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Tetrad Co.
Topp Industries
Torrington Co.
Triplex Machine Tool
Vallorbs Jewel Co.
Western Automatic Mach.
Whittington Pump & Eng.
Wilder, Inc., R. S.
Worley Jewel Co.

PLANE TABLES, see Surveying Instruments

PLANIMETERS, Automatic Flow Recording
Builders-Providence
Librascope, Inc.
Los Angeles Scient. Inst.
Minneapolis-Honeywell
Robertson, J. L.

PLANIMETERS, Linear and/or Radial (see also Integrators)
Amer. Meter Co.
B-I-F Industries
Bacharach Indust. Instr.
Bailey Meter Co.
Berger & Sons
Bruning Co., Inc.
Calif. Tech. Indus.
Dietzgen Co.
Foxboro Co.
Keuffel & Esser
Librascope, Inc.
Los Angeles Scient. Inst.
Opplem Co., Inc.
Pacific Transducer Corp.
Physics Research
Serdex, Inc.
Speidel & Co.
United States Blue Print
Warren-Knight
Weber Co.
White Co., David

PLANIMETERS, Square Root
Amer. Meter Co.
Bailey Meter Co.
Dietzgen Co.
Foxboro Co.
Keuffel & Esser
Librascope, Inc.
Los Angeles Scient. Inst.
Opplem Co., Inc.
Penn Insts. Div.
Speidel & Co.
Taylor Instr. Cos.
Weber & Co.
White Co., David

PLASTIC TEST INSTRUMENTS, including Hardness, Plasticity
Amer. Instr. Co.
Ann Arbor Instr. Works
Atlantic Research Corp.
Atlas Electric Devices
Brabender Corp.
Burrell Corp.
Bush Associates, G. F.
Custom Scientific Insts.
Dietert Co.
Dillon & Co.
Ferner Co.
Gardner Lab.
Gordon Co., Claud S.
Humboldt Mfg. Co.
Instron Engrg. Corp.
Magnaflux Corp.
Moore Co., H. R.
Munsell Color Co.
Olsen Testing Machine
Precision Scientific
Research Appliance Co.
Scott Testers, Inc.
Steel City Testing
Sweets Co., Martin
Taber Instr. Co.
Testing Machines, Inc.
Torsion Balance Co.
U. S. Testing Co.
Universal Aviation
Wilson Mech. Instr. Div.

PLASTIMETERS
Brabender Corp.
Fischer & Porter
Scott Testers, Inc.
Testing Machines, Inc.

PLATES, Name, see Nameplates

PLATINUM, Sheet, Foil, Gauze, Wire, etc., see Precious Metals

PLOTTER-FOLLOWERS, see Curve Followers, also X-Y Recorders, also Data Processing

PLUG-IN CIRCUITS and COMPONENTS, see Circuits, Plug-in

PLUGS, JACKS and RECEPTACLES, see Connectors

PLUMB BOBS
Berger Scient. Supps.
Brown & Sharpe
Bruning Co., Inc.
Dietzgen Co.
Engis Equipt. Co.
Garlynn Engrg. Co.
Graf-Apsco
Gurley, W. & L. E.
Keuffel & Esser
Leupold & Stevens
Lufkin Rule Co.
Millers Falls Co.
Post Co., Frederick
Refinery Supply Co.
Speidel & Co.
Starrett Co.
Suverkrop Instruments
Ulmer Co., J. C.
Warren-Knight
Weber Co.
White Co., David

POINTER STOPS
American Lava Corp.
Centralab Div.
Stupakoff Div.
Uniform Tubes

POINTER PULLERS
Gustafson Mfg.
Mansfield & Green
Marsh Corp., Jas. P.

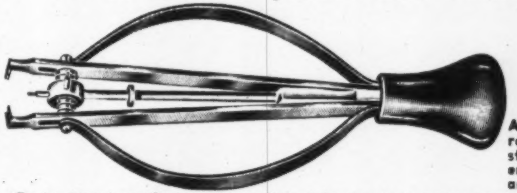
POINTERS and DIALS, FLUORESCENT, see Dials and Pointers, Fluorescent

POINTERS, Instrument
Ackerman Engravers
Allied Engraving
Allied Products Div.
Anderson & Sons
Burlington Instr. Co.
Can. Radium & Uranium
Carroll Co.
Croname, Inc.
Dale Products
Dimco-Gray
Edna Lite Co.
Electric Tachometer Corp.
Federal Screw Prods.
Grammes & Sons
Howard Clock
Marsh Corp., Jas. P.
Maryland Etching Co.
Miller Dial & Name Pl.
Parisian Novelty Co.
Phaostron Co.
Photo Chemical Prods.
Precision Mfg. Co.
Precision Prods. Co.
Precision Tube Co.
Preis Engrav. Mach.
Sampson Chem. & Pigm.
Scientific Instr. Co.
Sillcocks-Miller
Superior Tube Co.
Torrington Co.
Trerice Co., H. O.
Uniform Tubes
Vallorbs Jewel Co.
Waldom Electronics
Winn, Inc., J. H.

POLARIMETERS
Applied Physics Corp.
Baird-Atomic
Bausch & Lomb
Central Scientific
Epic, Inc.
Ercona Corp.
Fish-Schurman
Gaertner Scientific
Hacker, & Co., W. J.
Jarrell-Ash
Koehler Instr. Co.
Leitz, Inc.
Opplem Co., Inc.
Pfaltz & Bauer
Polarizing Instr. Co.
RCA
Rudolph & Sons
Sargent & Co.
Standard Polarimeter Co.
Zeiss, Inc., Carl

POLARISCOPE TUBES, see Tubes, Polariscope

POLARISCOPES, including Photo elasticity, Wool Testing
Ann Arbor Instr. Works
Bausch & Lomb
Central Scientific
Chapman Labs.
Fish-Schurman
Fuess, Inc.
General Radio
Gaertner Scientific
International Devel. Co.
Jarrell-Ash
Kollmorgen Optical
Lab. Optical Co.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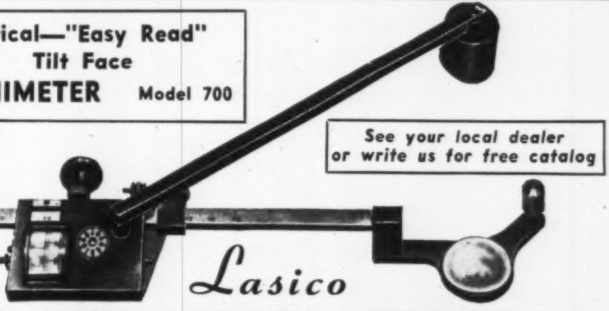
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MB Mfg. Co.
Meyer Opticraft
Optical Devel. Corp.
Pacific Transducer Corp.
Penn Optical & Instr.
Pfaltz & Bauer
Polarized Light-Photo Co.
Polarizing Instr. Co.
Precision Scientific
Prec. Thermom. & Insts.
QOS Corp.
Regal Instr. Co.
Ronar, Inc.
Rudolph & Sons
Welch Mfg. Co., W. M.
Zeiss, Inc., Carl

POLARITY INDICATORS (see also Phase)
Cal-Tronics Corp.
Gaertner Scientific
HD Electric
Pacific Transducer Corp.
Triplett Electcl. Instr.
Weston Electcl. Instr.

POLARIZERS, Light
Baird-Atomic
Eastman Kodak Co.
Edmund Scientific
Enteco Industries
Gaertner Scientific
Green Rectifier
International Optical
Lab. Optical Co.
Merry Instr. Co.
Meyer Opticraft
Opplem Co., Inc.
Phoenix Prec. Inst.
Polaroid Corp.
Regal Instr. Co.
Rudolph & Sons

POLARIZING PLATES
Central Scientific
Dearborn Scientific
Enteco Industries
Fish-Schurman
Gaertner Scientific
Graf-Apsco
Internat. Optical
Merry Instr. Co.
Opplem Co., Inc.
Pacific Transducer Corp.
Polarizing Instr. Co.
Regal Instr. Co.
Rudolph & Sons
Zeiss, Inc., Carl

POLISHING MACHINES, see Machines, Polishing

POLYGRAPHS
Associated Research
Bar-Ray Prods., Inc.
Electro-Medical Labs.
Gorrell & Gorrell

Instrumentation Assoc.
Lafayette Instr. Co.
Process & Instruments
Stoelting Co.

PORCELAIN DIAPHRAGMS (for Electrodes)
Centralab Div.
Fish-Schurman
General Ceramics
Superior Steatite

PORCELAIN, Laboratory, see Laboratory Apparatus

PORCELAIN PRODUCTS
American Lava Corp.
Brazilian Trading Co.
Centralab Div.
Dearborn Scientific
Du-Co Ceramics
Fish-Schurman
General Ceramics
Johnson Co., E. F.
Laboratory Equipt. Corp.
Lapp Insulator Co.
Manhattan Dial Mfg.
McDanel Refr. Porcelain
O'Hara Waltham Mfg.
Saxonburg Ceramics
Selas Corp. of Amer.
Stupakoff Div.
Superior Steatite
Technical Soldering Co.
Thermo Materials, Inc
Thor Ceramics, Inc.
U. S. Stoneware Co.

POROSITY TESTERS
Atmosphere Control
Ferner Co.
Fisher Scientific
General Mills, Inc.
Greiner, Emil
Gurley, W. & L. E.
Koehler Instr. Co.
Magnaflux Corp.
Nuclear Research
Perkins & Son
Poole Instruments, Inc.
Precision Scientific
Refinery Supply Co.
Ruska Instr. Co.
Saxl Instr. Co.
Testing Machines, Inc.
Thwing-Albert
U. S. Testing Co.
Westinghouse Electric
Whittington Pump
Williams Apparatus Co.

POROUS WARE FOR ELECTROLYSIS
Fish-Schurman
Kontes Glass
Saxonburg Ceramics

POSITION INDICATORS and/or RECORDERS, see Displacement

POSITIONERS, Digital, see Servomechanisms, Digital

POSTS, BINDING, see Connectors

POTENTIAL DETECTORS (see also Voltmeters, also Electrometers)
Associated Research
Bristol Co.
Burton Mfg. Co.
Consolidated Avionics
Donner Scientific
Feiler Engrg. Co.
GE
Georator Corp.
Hickok Elec. Instr.
Industrial Test. Equipt.
Littelfuse Inc.
Peschel Electronics
Sensitive Res. Instr.
Varo Mfg. Co.
WacLine, Inc.
Westinghouse Electric

POTENTIAL DIVIDERS, see Potentiometers (Resistors)

POTENTIOMETERS, Manually-balanced
Accuracy, Inc.
Aerovox Corp.
AiResearch Mfg. Co.
Allegany Instr. Co.
B & H Instr. Co.
Barber-Colman
Bristol Co.
Bruno-N. Y. Indus.
Centralab Div.
Clarostat Mfg. Co.
Dale Products
Daystrom-Pacific
DeJur Amsco Corp.
Donner Scientific
Edcliff Instruments
Electro Measurements, Inc.
Electromath Corp.
Electro-Mec Laboratory
Fisher Research Lab.
Foxboro Co.
Gray Instr. Co.
Howell Instr. Co.
Jarco Services, Inc.
K-F Devel. Co.
Leeds & Northrup
Lewis Engrg. Co.
Minneapolis-Honeywell Indust. Div.
Muirhead Instrument
Osborne Electric

Physics Res. Labs., Inc.
Pimex, Inc.
Precision Line, Inc.
Rubicon Co.
Samarius Electronics
Tech Labs., Inc.
Technique Associates
Thermo-Electric Co.
Thwing-Albert
Weston Elect. Inst. Corp.
Williamson Devel. Co.

POTENTIOMETERS, Self-Balancing, Automatic Control, Indicating and/or Recording (see also Bridges)
Ace Electronics
Allen-Bradley
American Electronics
Amer. Instr. Co.
Arma Div.
Automatic Control
Autonetics Div.
B & H Instr. Co.
Bailey Meter Co.
Baldwin-Lima-Hamilton
Barber-Colman
Beckman & Whitley
Bendix Aviation
Black, Sivalls & Bryson
Borg Corp.
Bristol Co.
Burton Mfg.
Cambridge Instr. Co.
Centralab Div.
Clarostat Mfg. Co.
Coleman Electcl. Co.
Corbett Science Labs.
Dickson Co.
Distillation Products
Donner Scientific
Edcliff Instruments
Edin Electronics
Electrical Devel. Co.
Electro-Mech Lab.
Electronic Associates
Electronic Prods. Co.
Endevco Corp.
Engrg. Enterprises
Epic, Inc.
Ess Instr. Co.
Feedback Controls
Feiler Engrg. Co.
Fielden Instr. Div.
Foxboro Co.
General Controls Co.
GE, Apparatus Sales
Geophysical Instr. Corp.
Georator Corp.
Geotechnical Corp.
Giannini & Co.
Gilmore Industries
Gordon Co., Claud S.
Gray Instr. Co.
Greenleaf Mfg. Co.
Gyromechanisms, Inc.

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tel: SOmerset 6-5130 - Engineering Representatives in Principal Cities

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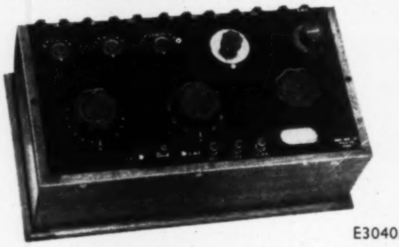

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Hellige, Inc.
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Humphrey, Inc.
Industrial Control Co.
Indust. Electronic Engrgs.
Industronics
J-B-T Instruments
Jarvis Electronics
Land-Air, Inc.
Larson Instr. Co.
Lear, Inc.
Leeds & Northrup
Lewis Engrg. Co.
Manning, Maxwell & Moore
Mason Neilan Div.
Miller M. C.
Minneapolis-Honeywell,
  Industrial Div.
Non-Linear Systems
Norden-Ketay
Opplem Co., Inc.
Pacific Scientific
Performance Measur. Corp.
Phoenix Prec. Inst.
Precise Measmts. Co.
Reed Research
Rex Rheostat
Robertshaw-Fulton
Rubicon Co.
Sargent & Co.
Schwien Engrg. Co.
Sensitive Research Instr.
Servomechanisms, Inc.
Servonic Instruments
Simpson Electric
Sound Apparatus
Southwestern Indust. Instr.
Spence Engrg. Co.
Summers Gyroscope
Tech Labs., Inc.
Thermo-Electric Co.
Thwing-Albert
Topp Industries
United Optical Mfg.
Varian Assocs.
Welch Mfg. Co., W. M.
West Instr. Corp.
Weston Electcl. Instr.
Westronics, Inc.
Wheelco Instr. Div.
Williamson Devel.
Yardney Engrg.

POTENTIOMETERS (Resistors), Linear Motion, see Displacement Pickups

POTENTIOMETERS, (Resistors), Linear and Non-Linear, Precision

Accuracy, Inc.
Ace Electronics
Aero Electronics (Calif.)
Affiliated Gas Equipt. Co.
Alina Corp.
Allen-Bradley Co.
Amer. British Electric
Amer. Electronics
Amer. Instr. Co
Analogue Controls, Inc.
Anton Electronic Labs.
Arma Div.
Avion Instr. Co.
B & H Instr. Co.
Bailey Meter Co.
Beattie-Coleman
Benson-Lehner
Black, Sivalls & Bryson
Borg Corp.
Bourns Labs.
Bristol Co.
Burton Mfg.
Carter Mfg. Co.
Chicago Indust. Instr.
Chicago Telephone Sup.
Circuit Insts., Inc.
Clarostat Mfg. Co.
Colvin Labs., Inc.
Computer Insts. Corp.
Corbett Science Labs.
Dale Products
Daven Co.
Daystrom Instrument
Daystrom Pacific
DeJur-Amsco
Edcliff Instruments
Electrical Devel. Co.
Electromath Corp.
Electro Measmts, Inc.
Electro-Mec Laboratory
Electronic Associates
Elektro-Serv Co.
Engrg. & Res. Corp.
Fairchild Conts. Corp.
Feedback Controls
Fielden Instr. Div.
Ford Engrg. Co.
Ford Instr. Co.
Gamewell Co.
General Controls Co.
General Radio
Genisco, Inc.
Giannini & Co.
Gray Instr. Co.
Gyromechanisms, Inc.
Handley Electronics
Helco Prods. Corp.
Helipot Div.
Howell Instr. Co.
Humphrey, Inc.
Hycor Co., Inc.
International Resistance
Jarvis Electronics
K-F Devel. Co.
Kearfott Co.
Lectronic Research
Leeds & Northrup
Librascope, Inc.
Magnavox Co.
Minco Products
Minneapolis-Honeywell
Norden-Ketay
Osborne Electric
Pacific Scientific
Paul & Stein Bros.
Perkin-Elmer
Precision Line Inc.
Precision Resistance
Radiaphone Co.
Research Instr. Co.
Retron Corp.
Rex Rheostat
Rubicon Co.
Samarius Electronics
San Fernando Elect. Mfg.
Servomechanisms, Inc.
Servonic Instruments
Servonics, Inc.
Servotrol Co.
Shallcross Mfg. Co.
Specialties, Inc.
Spectrol Corp.
Spectrol Electronics Div.
Tech Labs., Inc.
Technology Instr. Div.
Topp Industries
United Optical
Vacuum Film Products
Vectron, Inc.
Waters Mfg., Inc.
West Instr. Corp.

POTENTIOMETERS (Resistors), Low Torque

Accuracy, Inc.
Affiliated Gas Equipt. Co.
Alina Corp.
Allen-Bradley Co.
Analogue Controls, Inc.
Anton Electronic Labs.
B & H Instr. Co.
Carter Mfg. Co.
Centralab Div.
Circuit Insts. Inc.
Clarostat Mfg. Co.
Computer Insts. Corp.
Corbett Scient. Labs.
Dale Products
Daven Co.
Daystrom-Pacific
DeJur-Amsco
Edcliff Instrs.
Electro-Mec Laboratory
Electromath Corp.
Fairchild Conts. Corp.
General Radio Co.
Giannini & Co.
Helco Prods. Corp.
Helipot Div.
Mallory & Co., P. R.
Minco Products, Inc.
Norden-Ketay
Ohmite Mfg. Co.
Osborne Electric
Paul & Stein Bros.
Perkin-Elmer
Precision Line Inc.
Research Instr. Co.
Retron Corp.
Samarius Electronics
San Fernando Elect. Mfg.
Servonics, Inc.
Shallcross Mfg. Co.
Spectrol Electronics Div.
Stackpole Carbon Co.
Tech Labs., Inc.
Vectron, Inc.
Waters Mfg., Inc.
Wirt Co.

POTENTIOMETERS (Resistors), Multiturn, Precision

Aero Electronics (Calif.)
Affiliated Gas Equipt. Co.
Analogue Controls, Inc.
B & H Instr.Co.
Borg Equipt. Div.
Bourns Labs.
Carter Mfg. Corp.
Circuit Insts. Inc.
Clarostat Mfg. Co.
Computer Insts. Corp.
Corbett Scient. Labs.
Dale Products
Daystrom Instrument
Daystrom-Pacific
DeJur-Amsco
Edcliff Insts.
Electromath Corp.
Electro Measmts., Inc.
Engrg. & Res. Corp.
Fairchild Conts. Corp.
Ford Engrg. Co.
General Controls Co.
Giannini & Co.
Helco Prods. Corp.
Helipot Div.
Howell Instr. Co.
International Resistance
Norden-Ketay
Pacific Scient. Co.
Perkin-Elmer
Research Instr. Co.
Retron Corp.
Samarius Electronics
San Fernando Elect. Mfg.
Servonics, Inc.
Shallcross Mfg. Co.
Spectrol Electronics Div.

POTENTIOMETERS (Resistors), Pressurized

Affiliated Gas Equipt. Co.
Analgue Controls
Bristol Co.
Clarostat Mfg. Co.
Computer Insts. Corp.
Dale Products
DeJur Amsco Corp.
Engrg. & Res. Corp.
Fairchild Conts. Corp.
Giannini & Co.
Helco Prods. Corp.
Norden-Ketay
Perkin-Elmer
Precision Line, Inc.
Rex Rheostat
Samarius Electronics
Servonic Instruments
Tech Labs., Inc.
Trans-Sonics, Inc.

POTENTIOMETERS (Resistors), Sine-Cosine

Accuracy, Inc.
Ace Electronics
Affiliated Gas Equipt. Co.
Amer. Electronic Co.
Analogue Controls, Inc.
Anton Electronic Labs.
Black, Sivalls & Bryson
Burton Mfg.
Centralab Div.
Circuit Insts. Inc.
Clarostat Mfg. Co.
Computer Insts. Corp.
Corbett Science Labs.
Daystrom Instrument
Daystrom-Pacific
DeJur Amsco
Edcliff Instrs.
Electro-Mec Laboratory
Electronic Associates
Elektro-Serv Co.
Engrg. & Res. Corp.
Fairchild Conts. Corp.
Gamewell Co.
Giannini & Co.
Gyromechanisms, Inc.
Helco Prods. Corp.
Helipot Div.
Humphrey, Inc.
Jarvis Electronics
K-F Devel. Co.
Lectronic Res. Labs.
Norden-Ketay
Pacific Scientific
Perkin-Elmer
Precision Line Inc.
Precision Resistance
Rawson Electcl. Instr.
Research Instr. Co.
Samarius Electronics
San Fernando Elect. Mfg.
Servonics, Inc.
Spectrol Corp.
Spectrol Electronics Div.
Tech Labs., Inc.
Technology Instr. Div.
Topp Industries
Vectron, Inc.
Waters Mfg. Inc.

POTENTIOMETERS (Resistors), Single Turn

Accuracy, Inc.
Aerovox Corp.
Affiliated Gas Equipt. Co.
Alina Corp.
Allen-Bradley
Analogue Controls, Inc.
Arca Regulators
Askania Reg. Co.
Bendix-Pacific
Black, Sivalls & Bryson
Bristol Co.
Carter Mfg. Co.
Carter Radio Co.
Centralab Div.
Chicago Indus. Instr.
Cinema Engrg. Co.
Circuit Insts. Inc.
Clarostat Mfg. Co.
Computer Insts. Corp.
Corbett Scient. Labs.
Dale Products
Daven Co.
Daystrom-Pacific
DeJur-Amsco Corp.
Edcliff Instruments
Electromath Corp.
Electro-Mec Laboratory
Electro Mechanical Div.
Engrg. & Res. Corp.
Fairchild Conts. Corp.
Ford Engrg. Co.
Ford Instr. Co.
Galetronics Corp.
Gamewell Co.
GE
General Radio
General Scientific Div.
Genisco, Inc.
Giannini & Co.
Handley Electronics
Hays Corp.
Helco Prods. Corp.
Helipot Div.
Humphrey, Inc.
International Resistance
Jarvis Electronics
K-F Devel Co.
Librascope, Burbank Div.
Mallory & Co., P. R.
Minco Products
Norden-Ketay
Ohmite Mfg. Co.
Osborne Electric
Paul & Stein Bros.
Poole Mfg.
Precision Line Inc
Rawson Electrical Instr
Research Instr. Co.
Rex Rheostat
Samarius Electronics
San Fernando Elect. Mfg.
Servotrol Co.
Shallcross Controls
Shallcross Mfg. Co.
Southw. Ind. Electronics
Specialties, Inc.
Spectrol Electronics Div.
Stackpole Carbon
Tech Labs., Inc.
Thelen Co.
Triumph Mfg. Co.
U. S. Gauge Div.
Vectron, Inc.
Waters Mfg. Inc.
Wirt Co.

POTTED COMPONENTS, see Circuits, Potted

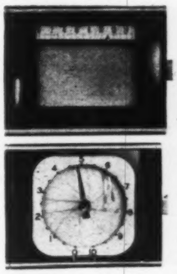
POTTING COMPOUNDS

Acme Wire Co.
Bacon Industries
Biggs Co., Carl H.
Ciba Co., Inc.
Dow Corning
Eastern Prec. Resistor
Freed Transformer

Potentiometers, Electronic, Round and Strip Chart

Bristol Electronic Dynamaster (R) Potentiometers will measure, record, or automatically control any variable that can be translated into an electrical quantity (d-c current, d-c voltage, capacitance, or resistance).

Offered in indicating, recording (up to 24 records on same chart), and controlling. All types of control: air operated, electric, electronic program control.



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112 Bristol Rd., Waterbury 20, Conn.

For more information circle **244** on inquiry card.

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Minn. Mining & Mfg.
RHO Engrg. Co.
Stanley Works
Sauereisen Cement Co
Zophar Mills, Inc.

POWDER METAL PARTS, see Magnetic Materials, also Metals, Powdered

POWER FACTOR INSTRUMENTS (see also Electric Power)

Allis-Chalmers
Amer. Kleeckner-Moeller
Amer. Mach. & Foundry
Boonton Radio
Bristol Co.
Cal-Tronics Corp
Clough-Brengle
Cutler-Hammer
Electronic Instr. Co.
Epic Inc.
Esterline-Angus
Feller Engrg. Co.
Fluke Mfg. Co.
Gates Electronic Co.
General Controls Co.
GE, Apparatus Sales
General Radio
Hickok Electcl. Instr.
Industrial Control Co
Kin Tel
Knopp, Inc.
Leeds & Northrup
Magnetic Instr. Co.
Physics Research
Roller-Smith
Sangamo Electric
Sensitive Res. Instr.
Shallcross Controls
Sorenson & Co.
Technology Instr. Div.
Triplett Electcl. Instr.
United Optical Mfg.
Welch Mfg. Co., W. M.
Westinghouse Electric
Weston Electcl. Instr.

POWER GENERATOR INSTRUMENTS, see Electric Power

POWER LEVEL INDICATORS

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Amplifier Co.
Audio Instr. Co.
Boonton Electronics
Boonton Radio
Bristol Co.
Clough-Brengle
Daven Co.
DeJur-Amsco
Electronic Devel. Lab
F-R Machine
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Fluke Mfg. Co.
GE
General Radio
Hickok Electcl. Instr.
Kearfott Co.
Kin Tel
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A completely electronic source of stable AC power

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Adler Electronics
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Airpax Prods. Co.
Altec Lansing
Amer. Electronics
Amer. Mach. & Foundry
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Ampex Corp.
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Autonetics Div.
Avien, Inc.
BJ Electronics
Baird-Atomic
Behlman Engrg. Co.
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Bendix, Red Bank
Bogue Elect. Mfg.
Booth Co., Arthur E.
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Cedar Engrg. Co.
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Consol. Electrodynamics
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El Mec Labs.
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Electronic Res. Assocs.
Electronic Tube Corp.
Empire Devices Prod.
Engineered Magnetics Div.
Excel Electric Service
Fenway Mach. Co.
Fisher Research Lab.
Fluke Mfg. Co.
Freed Transformer
GE Apparatus Sales
General Radio
Gordos Corp.
Green Rectifier Co.
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Indust. Test Equipt.
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Magnetic Res. Corp.
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Vectron, Inc.
Vibration Res. Labs.
Victoreen Instr. Co.
Virginia Electronics
Walker Div.
Welch Mfg. Co., W. M.
Western Gear Corp.
Westinghouse Electric
Wheeler Insul. Wire

POWER SUPPLIES, D. C. (see also Batteries)

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Adler Electronics
Aerovox Corp.
Aircraft Radio Corp.
Airpax Prods. Co.
Alfred Electronics
Amer. Electronics
Amer. Mach. & Foundry
Amer. Television & Radio
Arnoux Corp.
Assembly Products
Atchley, Inc., Raymond
Atlas Engrg. Co.
Auto. Electric Sales
Autron Engrg., Inc.
BJ Electronics
Baird-Atomic
Belock Instr.
Bendix, Red Bank
Berkeley Div.
Beta Electric Corp.
Bogue Elect. Mfg.
Booth Co., Arthur E.
Bradley Labs.
Bristol Engrg. Corp.
Brit. Electronic Sales Co.
Burroughs Electronics
Burton Mfg. Co.
Calidyne Co.
Calif. Magnetic Cont. Corp.
Carol Electronics
Carter Motor Co.
Cedar Engrg. Co.
Chatham Electronics Div.
Computer Engrg. Assocs.
Christie Elect.
Consolidated Avionics
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GALVO

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COMPACT Size: Only 2.6" x 3.62" x 3.615"

sensitive .105 microamps per millimeter

Here is a new series of light-beam galvanometers that were developed to withstand the extremely severe conditions of shock and vibration encountered in field servicing and testing of jet aircraft.

Through unique folding of the light beam, great compactness is achieved while retaining sensitivity to the highest degree ... *equal to that of laboratory instruments!*

These Howell Galvanometers feature excellent readability. They are readily adaptable to existing instruments. They are competitively priced.

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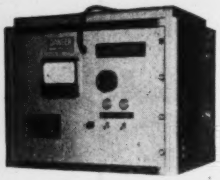
All of the following Standard NEUTRONIC Lab-Type units are now available with .1% *Regulation*



RACK MOUNTED . . . BENCH TYPE CABINETS

Model	Voltage Range	Current Range	Regulation
21K	1—10 KV	10 ma @ 5 KV	....
21KR	1 10 KV	10 ma @ 5 KV	½%
21M	1—12 KV	6 ma @ 10 KV	....
21MR	1—12 KV	6 ma @ 10 KV	½%
22C	3—26 KV	2 ma @ 18 KV	....
22CR	5—26 KV	2 ma @ 18 KV	½%
22M	5—30 KV	3 ma @ 20 KV	....
22MR	5—30 KV	3 ma @ 20 KV	½%
23C	5—40 KV	1.3 ma @ 25 KV	....
23CR	5—40 KV	1.3 ma @ 25 KV	½%
23M	5—45 KV	1.5 ma @ 30 KV	....
23MR	5—45 KV	1.5 ma @ 30 KV	½%
24C	5—50 KV	1 ma @ 35 KV	....
24CR	5—50 KV	1 ma @ 35 KV	½%
24M	5—50 KV	2 ma @ 30 KV	....
24MR	5—50 KV	2 ma @ 30 KV	½%
23S	3—35 KV	3 ma @ 30 KV	....
23SR	5—35 KV	3 ma @ 30 KV	½%

REVERSIBLE OUTPUT MODELS ALSO AVAILABLE

3 NEW NEUTRONIC ECONOMY POWER UNITS AT AMAZING LOW COST.

MODEL 75 BR
SIZE: 7¼x8x8
VOLTAGE RANGE:
2—7-5 KV-DC
CURRENT OUTPUT:
1 ma @ 6 KV
REGULATION:
Better than 1% .. $98.50

MODEL 15 BR
SIZE: 7¼x12x8
VOLTAGE RANGE:
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CURRENT OUTPUT:
1 ma @ 10 KV
REGULATION:
Better than 1% $164.50

MODEL 30 BR
SIZE: 7¼x14x8
VOLTAGE RANGE:
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CURRENT OUTPUT:
1 ma @ 20 KV
REGULATION:
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Write to Dept. I for completely new catalog and price list.

Prices Subject to Change Without Notice

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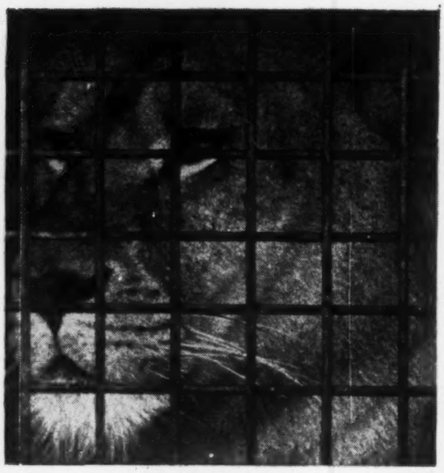

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Specify "H" Series Regulated DC Power Supplies. Universal's heavy duty, high current power supplies are built in voltage ranges from 25 to 400V, and in 1, 2 and 3 Amp current ranges.

Standard (0.5%) or Precision (0.1%) Regulation.
Forced air cooling on 2 and 3 Amp models.
For complete specifications write today for Bulletin H-57.

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AMP, Inc.
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ELECTRONICALLY REGULATED D. C. CONSTANT VOLTAGE POWER SUPPLIES

The output voltage is continuously variable from 200 to 325 volts D.C. for load currents of 0 to 100 M.A. with an input voltage of 105 to 125 volts 60 cycle. Regulation is better than 1%. An isolated A.C. voltage of 6.3 volts at 3 amperes is available at the output terminal connections.

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MODEL 3 CAB. MTG., VOLTMETER	$69.50
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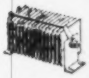
109 LIBERTY ST., NEW YORK 6, N.Y.

New "TEKSEL"® SELENIUM RECTIFIERS* Engineered for Automation & Industry "Technical Apparatus Builders" Mfgrs. Industrial Power Rectifiers with "KOOLTAB" Current Collectors & Brackets. Also to Your Specs Any Current. Quick Deliveries! Replacements Our Specialty. *Write for Quantity Prices.*



*FULL WAVE BRIDGE & †C.T. • DATED & ONE YEAR GTD.

MAX DC AMP	Single Phase Full Wave Bridge 18VAC 14VDC	36VAC 28VDC	54VAC 42 VDC	72VAC 54VDC	130VAC 100VDC	266VAC 217VDC	3-Phase Bridge 3 phase 16VAC 20VDC	3-Phase 30VAC 36VDC	3-Phase 120VAC 150VDC	3-Phase 208VAC 256VDC
1	$1.50	$2.30	$3.75	$5.30	$8.75	$27.90	$3.75	$4.90	$21.45	$39.75
2	2.35	3.35	5.40	6.45	11.70	33.60	4.75	5.95	24.90	47.90
3	3.00	4.15	6.30	9.60	13.45	42.90	5.40	6.85	27.60	63.30
4	3.70	7.50	11.30	16.15	25.00	49.80	6.75	7.95	31.15	69.75
6	4.45	8.85	12.90	19.30	32.85	63.90	7.90	9.30	48.45	81.90
10	6.50	12.60	19.90	27.90	42.30	99.70	9.00	14.25	63.60	117.75
12	8.10	15.90	22.50	32.75	45.90	111.45	10.75	16.15	69.75	137.90
20	13.20	25.40	38.00	52.50	79.45	177.90	16.20	24.75	124.15	165.75
24	16.15	32.40	44.90	63.60	86.35	210.60	18.60	31.70	149.70	279.90
30	19.80	37.80	56.45	78.75	120.75	256.15	21.60	34.95	189.60	363.75
36	24.90	48.45	72.45	95.70	147.60	326.70	24.75	39.30	225.75	399.60
50	33.45	63.75	121.50	135.75	192.75	445.90	31.60	46.75	297.90	591.75

Battery Charger Stacks * †

6&12VDC—OUT FAN COOLED

CR20R† $14
6VDC @ 100AMP

REPLACEMENT OR CONVERSION

6&12VDC
100/50AMP
CR32D† $20
BR18R* $24
BR18C* $26

BN18R* $20
6& 12 VDC
80/40AMP

BATTERY CHARGER STACKS VOLTS AC INPUT : CR20R† 10VAC/CT., CR32D†16VAC/CT, BR18R—BR18C*—BN18R*—18VAC.*

COMING NEW "SILTAB"® SILICON JUNCTION HITEMP RECTIFIERS! *WRITE*

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High Current Power Supplies
One Year Guarantee

Variable 0-28 VDC. Completely built. Ready to go. Full Wave Selenium Rectifier, Transformer, Variac, Meters, Pilot Light. 4" Volt & Amp Meters, Switch, Terminals & Fuse, Hvy Duty Steel Cabinet. **Std. 115V/60cy Input or 220V† (3 phase) to order.**

Stock Number	Continuous Rating	With Meters
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T28V5ACC	5 Amp (1% Ripple)	84
T28V5A2CC	5 Amp 0.1% Ripple	155
T28V12A	0-28 VDC at 12 Amp	138
T28V12ACC	12 Amp (1% Ripple)	168
T28V12A2CC	12 Amp 0.1% Ripple	250
T35V16ACC†	0 to 35V @ 16 Amp/.5% Ripple	210
T28V24A†	0-28 VDC at 24 Amp	175
T28V24ACC†	24 Amp 1% Ripple	250
T28V24A2CC†	24 Amp 0.1% Ripple	345
T28V50A†	0-28 VDC at 50 Amp	325
T28V50ACC†	50 Amp (1% Ripple)	450
T28V100A†	0-28 VDC at 100 Amp	550
T28V100ACC†	100 Amp (1% Ripple)	750
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Variable 0-130 VDC Completely built.
Includes Isolation Transformer, Selenium F.W. Bridge, Rectifier, 4" Rectangular Volt & Ammeter Specify for 115 or 230VAC/1ø/60cy input.

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T130V10ACC†	10 Amp 1% Ripple	369

Includes 4" Meters 2% Acy. *2" Meters

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Sec'd Volts (DUAL† 0-9-15-18-&0-9-15-18 Series Sec'ds 0-3-6-9-12-15-18-21-24-27-30-33-36 Volts.

TR4001 @ 1 Amp ea/sec/wndg.§	$ 4.95
TR4002 @ 2 Amp ea/sec/wndg.§	7.20
TR4003 @ 5 Amp ea/sec/wndg.§	9.45
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TR4006 @ 24 Amp ea/Sec Wndg.§	35.65
TR4007 @ 50 Amp* per each SEC WNDG.§	59.65
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† Wndgs. in Series at Amps shown; Parallel 2X Current, Voltage equals 0-9-15-18§
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All Primaries 115 & 230VAC /60 cy/1ø Input.
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TR4010* @ 10 Amp Continuous Duty	$ 72

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§ Selenium F. W. Bridge Rectifier Extra!

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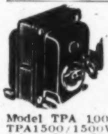
CE 2005M 500 mfd @ 200 V **$6 ea., 4/$22, 10/$45**
Brackets for capacitors **25c ea., 5 for $1.**



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For 220v/60cy Input. To 110-120V or Step up. With Cord, Plug & Receptacle.

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Model TPA 1000 Watts: 1 kw†	**$16.95**

TPA1500/1500W* **$22.50**; TPA2000/2 KW* **$34.00**
*** Less Cord, Plug & Receptacle**

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Also one & 3-phase Booster Transformers.

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104 to 115V. TPB21/1KVA **$15**, TPB22/2KVA **$20**
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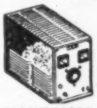
New Variable 0 to 6 & 12 Volt 12 Amp DC Power Supply, Filtered



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Extra Hvy Duty Selenium Rectifier, 2 Meters V. & A. Desgnd for Cont. Service and up to 20 Amp Intermittent overload; 10% Ripple.

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NEW! LOW PRICED HIGH CURRENT BASIC SUPPLIES

Consisting of Transformer & Full Wave Bridge Rectifier mtd and wired, fused, outlet, pilot light & ventilated grill & chassis or cabinet. Ready to deliver **constant DC Power.** 1 yr. Gtd. Input 115 VAC/60 cys.

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B28V/24A	0-28 VDC at 24 Amp	139
B28V/24ACC	24 Amp (1% Ripple)	189
B28V/50A*	0-28 VDC at 50 Amp	225
B28V/50ACC*	50 Amp (1% Ripple)	350
B28V/100A*	0-28 VDC at 100 Amp	439
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B100V1A	100 VDC @ 1 Amp	$39
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B220V5A*	220 VDC @ 5 Amp	234
B115V5ACC*	115 VDC @ 5 Amp 1% Ripple	169
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New "Tekpak" Relay 24 VDC Supplies Cased Filtered Ready to Work. Input 115 VAC/60 cys.

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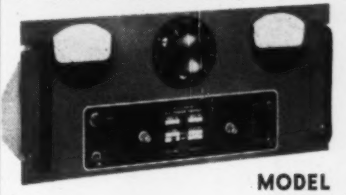

MODEL TM25

VOLTAGE REGULATED

RIPPLE: 0.03% at Maximum Load.
REGULATION:
LINE, ±1% for line change of ±10% from nominal 115 V.
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Write for Literature

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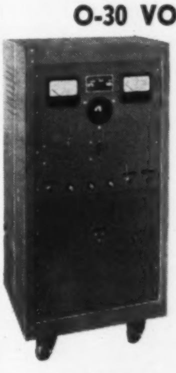

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4 - 5% of Average DC Output.

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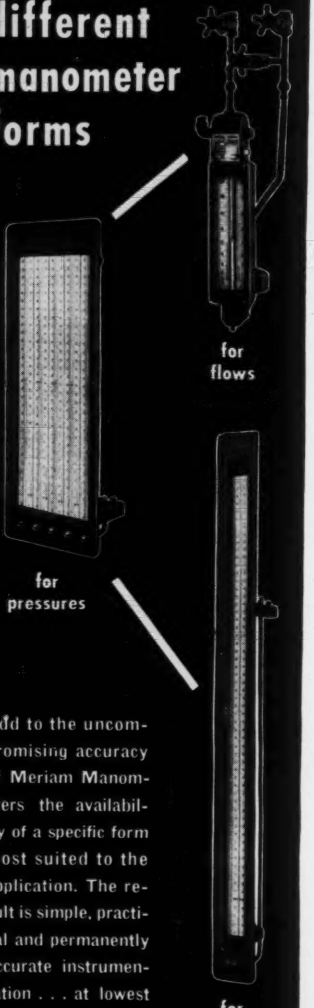

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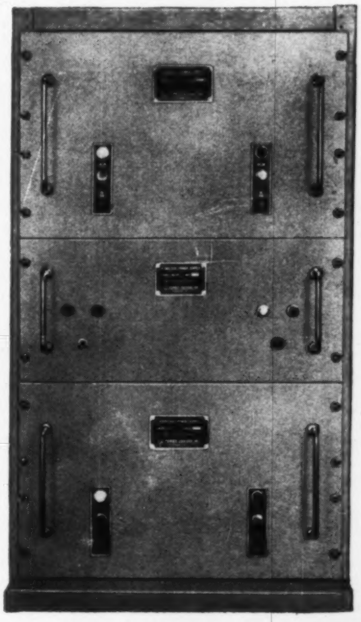

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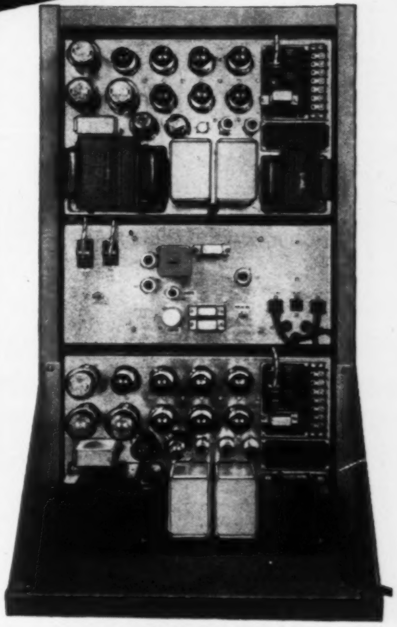

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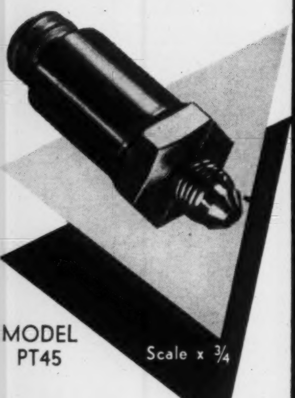

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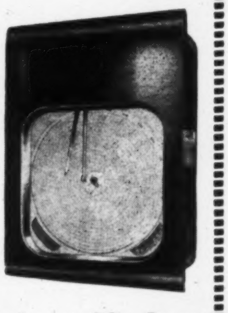

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Hammel-Dahl
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Norgren Co., C. A.
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Perfex Controls Div.
Powers Reg. Co.
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Prec. Thermom. & Insts.
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Republic Mfg. Co.
Research Controls
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RKL Valve & Mfg. Co.
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Rockwell Engrg. Co.
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PRESSURE DIFFERENTIAL, see Flow or Level

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Barton Instr.
Bendix Aviation Corp.
Bristol Co.
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Burton Mfg. Co.
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Cleveland Fuel Equipt.
Colvin Labs., Inc.
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Barton Instr. Corp.
Bristol Co.
Fischer & Porter Co.
Foxboro Co.
Hagan Chem. & Controls.
Hays Corp.
Humphreys, Inc.
Indust. Instr. Corp.
Instruments, Inc.
Leslie Co.
Manning, Maxwell & Moore
Mason-Neilan Div.
Minneapolis-Honeywell
  Indust. Div.
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Penn Insts. Div.
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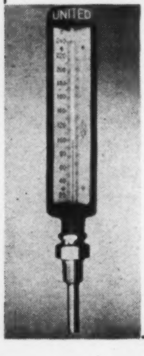

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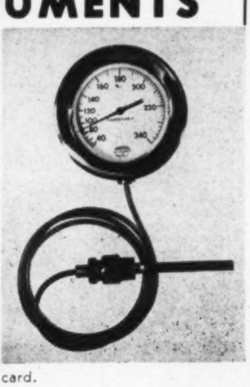

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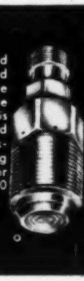
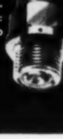
For use with Norwood Controls EP air-cooled Transducers where temperature of the pressure medium is between 250°F and 600°F, such as in extruding and molding processes. Suitable for pressures up to 10,000 psi.



Model 104 Pressure Transducer

For high pressure applications in blast analyses, gun barrel pressures, hydraulic high pressures, etc. Frequency response: flat from 0-20,000 cps. Pressure ranges: 0-20,000 up to 0-60,000 psi.



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Highly accurate, versatile transducers for dynamic pressure measurements requiring high frequency response (flat from 0-20,000 cps). Ranges from 0-100 up to 15,000 psi.

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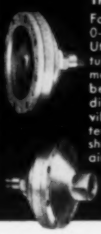
Water-cooled, high frequency transducer for pressure studies under very high temperatures. Can be exposed to gas temperatures above 5000°F without damage. All welded construction for any applications, including highly corrosive liquids and propellants. Pressure ranges: 0-1,000, 2,000 and 5,000 psi.



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Complete technical information available upon request

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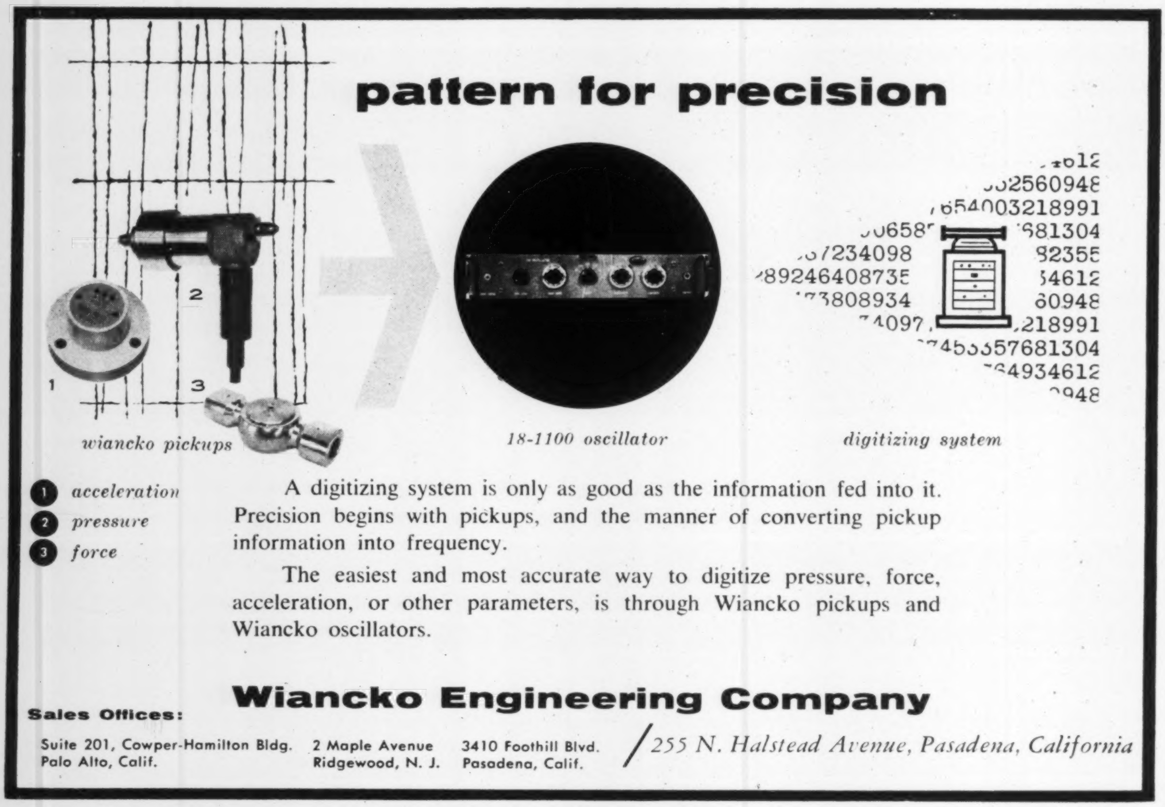

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The superiority of Helicoid Gages is most evident in severe service—wherever a gage is subjected to violent pressure pulsations or severe mechanical vibrations.

The *sustained accuracy* of Helicoid Gages over *millions of cycles* is explained by the details of design and construction of the Helicoid movement shown at the right.

Rolling action of the cam facing against the roller surface . . . graphited Bakelite bushings, roller pivot base and cam facing . . . K Monel connecting links and screws . . . all such Helicoid features protect against wear and corrosion and assure sensitivity, sustained accuracy and trouble-free operation through millions of cycles.

Patented in the U.S.A. and in foreign countries
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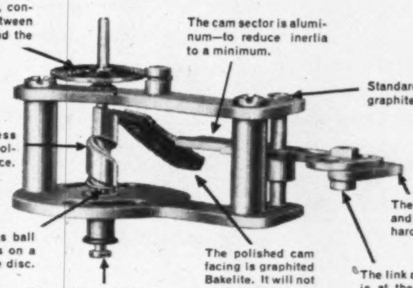

The tension in the stainless steel hair spring maintains smooth, continuous contact between the cam facing and the helicoid roller.

The cam sector is aluminum—to reduce inertia to a minimum.

Standard bushings are graphited Bakelite.

The roller is stainless steel with a highly polished helicoid surface.

The connecting link and the screws are hardened K Monel.

The roller pivot is ball shaped, and rides on a graphited Bakelite disc.

The polished cam facing is graphited Bakelite. It will not warp or distort.

The link adjusting screw is at the rear to facilitate calibrating the Helicoid Gage.

The hairline pointer adjustment screw is stainless steel.

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Only Helicoid Gages have the external pointer adjustment pictured here. The Helicoid type adjustment cannot be jarred out of position.

Calibration of Helicoid Gages is accomplished easily, without removing dial or pointer, because the link adjusting screw is at the rear of the system.

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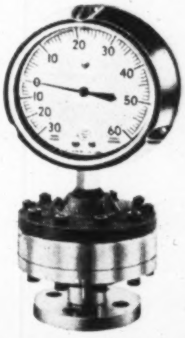
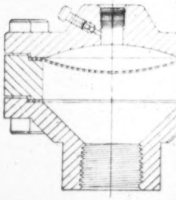
The Helicoid Chemical Gage has a guaranteed accuracy of plus or minus 1%. It is applicable for working pressures from 30" vacuum to 5000 p.s.i. and temperatures to 400° F. It is particularly suitable for chemicals and other viscous fluids which might clog or corrode a Bourdon tube. Pressure and or vacuum is transmitted directly to the indicating gage element through deflection of a Teflon or Kel F sealing diaphragm. The indicating system above the diaphragm is filled completely with specific inert liquids.





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Pump suitable for any pressure to 10,000 psi. Complete fittings to service all pressure instruments.

TWIN SEAL Pressure Test Unit arranged for portable testing. Weight filled with oil approximately 11½ lbs.

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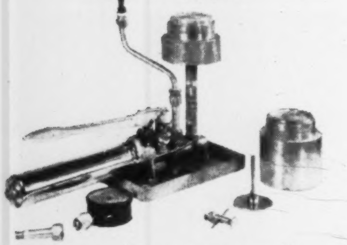
TWIN SEAL Pressure Test Unit arranged for dead weight testing. Eight models for dead weight testing. Pressure ranges 2000, 3000, 5000 and 10,000 psi. Mounted on drip pan.



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Bailey Meter Co.
Baldwin-Lima-Hamilton
Barber-Colman Co.
Barton Instr.
Beckman & Whitley, Inc.
Bourns Labs.
Bristol Co.
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Builders-Providence
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Cameron Iron Works
Century Electronics
Chatillon & Sons
Coleman Instruments
Commercial Research
Cook Electric
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Crescent Engrg. & Res.
Crosby Steam Gage
Defender Instr. & Reg.
Dickson Co.
Dillon & Co.
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Electronics Prods. Co.
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Endevco Corp.
Esterline-Angus
Fischer & Porter Co.
Fisher Governor
Foxboro Co.
Gems Co.
General Controls
Giannini & Co.
Gilmore Industries
Gotham Instr. Co.
Hagan Chem. & Control
Hathaway Instr. Co.
Hays Corp.
Heise Bourdon Tube Co.
Helicoid Gage Div.
Indikon Co.
Industrial Electronics
Indust. Instr. Corp.
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Kistler Instr. Co.
Kollsman Instr. Co.
Leeds & Northrup
Linde Co.
Manning, Maxwell & Moore
Mansfield & Green
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Martin-Decker Corp.
Mason Neilan Div.
McAlear Mfg. Co.
Meriam Instr. Co.
Minneapolis-Honeywell
  Indust. Div.
Moore Products
Norden-Ketay
Northam Electronics
Penn. Insts. Div.
Photocon Research Prods.
Pneumercator Co., Inc.
Rahm Instruments
RCA Div.
Republic Flow Meters
Rochester Mfg. Co.
Ruge Assocs.
Ruska Instr. Corp.
Schaevitz Engineering
Scientific Instr. Co.
Servonic Instruments
Sheffield Corp.
Star-Martin Gage Co.
Statham Labs.
Streeter-Amet
Studebaker Hydraulic Prods.
Swartwout Co.
Taber Instr. Corp.
Taylor Instr. Cos.
Trerice Co.
United Electric
United Instr. Co.
U. S. Gauge Div.
Weksler Thermom. Corp.
Weston Elect. Inst. Corp.
Wiancko Engrg. Co.

PRESSURE INDICATORS, Membrane (see also Draft)

Askania-Werke, A. G.
Burton Mfg. Co.
Century Electronics
Chesapeake Instr.
Consol. Electrodynamics
Defender Instr. & Reg.
Dwyer Mfg.
Edcliff Instruments
Ellison Draft Gage Co.
Hays Corp.
Henschel Corp.
Penn Insts. Div.
Republic Flow Meters
Ruska Instr. Corp.
Scientific Instr. Co.
Ultradyne Engrg. Co.

PRESSURE INDICATORS, Peak, Including Blast Meters

Allegany Instr. Co.
Atlantic Res. Corp.
Beckman & Whitley
Chesapeake Instr. Corp.
Cook Electric
Datron Electronics
Endevco Corp.
Indikon Co.
Kistler Instr. Co.
Massa Labs.
Photocon Res. Prods.
Shepard Labs.

PRESSURE INDICATORS, Piezoelectric

Amer. Instr. Co.
Atlantic Research Corp.
Brush Electronics
Centralab Div.
Chesapeake Instr. Corp.
Control Devices
Crystal Research Labs.
Dyna Empire, Inc.
Endevco Corp.
Gulton Industries
Kistler Instr. Co.
Martin-Hubbard Corp.
Massa Labs.
RCA Div.
Scott, Inc., H. H.

PRESSURE INDICATORS, Piston, Spring or Weight-Loaded

Amer. Instr. Co.
Bacharach Indust. Instr. Co.
Bailey Meter Co.
Burton Mfg. Co.
Cameron Iron Works
Century Electronics
Chatillon & Sons
Colebman Instr. & Mfg.
Commercial Research
Dillon & Co.
Gems Co.
Gilmore Industries
Hagan Chem. & Controls
Ideal Lab. Tool
Industrial Electronics
Manning, Maxwell & Moore
Mansfield & Green
Republic Flow Meters
Webster Instr. Inc.

PRESSURE INDICATORS, Precision, including large Dial

Acme Gauge & Instr. Co.
Askania-Werke, A. G.
B-I-F Industries
Bendix-Friez
Burton Mfg. Co.
Chatillon & Sons
Consol. Electrodynamics
Emery Co., A. H.
Fischer & Porter Co.
Glaser Enterprises
Guardian Elec. Mfg.
Hagan Chem. & Controls
Hass Bros. Instr. Co.
Heise Bourdon Tube Co.
Helicoid Gage Div.
Kollsman Instr. Corp.
Manning, Maxwell & Moore
Marsh Corp., Jas. P.
Martin-Decker Corp.
Morehouse Machine Co.
Scientific Instr. Co.
Sparling Meter Co.
Trerice Co.
U. S. Gauge Div.
Wallace & Tiernan

PRESSURE INDICATORS, Single-tube, Liquid Column, see Manometers

PRESSURE INDICATORS, U-tube, see Manometers

PRESSURE INSTRUMENT CALIBRATORS, Dead Weight

Amer. Instr. Co.
Ames Co., B. C.
Amthor Testing Instr. Co.
Ann Arbor Instr. Works
Baldwin-Lima-Hamilton
Beacon Gage
Burton Mfg. Co.
Central Scientific
Chatillon & Sons
Coleman Instruments
Consol. Electrodynamics
Crosby Steam Gage Co.
Custom Scientific
Darley Co., W. S.
Daytronic Corp.
Defender Instr. & Reg.
Eastern Specialty
GE
Gilmore Instruments
Gordon Co., Claud S.
Grove Valve & Reg. Co.
Ideal-Aerosmith
Instrument Assocs.
Link Engrg. Co.
Manning, Maxwell & Moore
Mansfield & Green
Marshalltown Mfg. Co.
Morehouse Machine Co.
Myer Corp.
Olsen Testing Machine
Precision Scientific
Refinery Supply Co.
Ruska Instr. Corp.
Size Control Co.
Star-Martin Gage Co.
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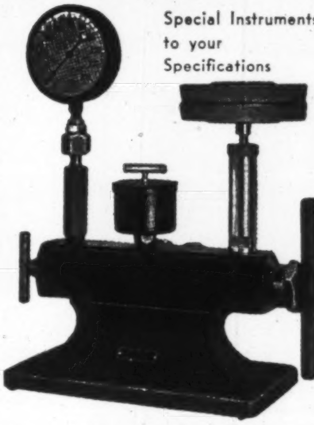

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Testing Machines, Inc.
Trerice Co.

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B-I-F Industries
BJ Electronics
Baldwin-Lima-Hamilton
Bendix-Pacific
Bristol Co.
Brush Electronics
Chesapeake Instr. Corp.
Collins Corp. G. L.
Colvin Labs., Inc.
Consol. Electrodynamics
Control Components Co.
Cook Electric
Crescent Engrg. & Res.
Datran Electronics
Dayton Instruments
Decker Aviation Corp.
Dynamic Instr. Co.
Dynamics Res. Assoc.
Edcliff Instrs.
Electro Prods. Labs.
Electronic Engrg. Assocs.
Electronics Devel. Lab.
Electro-Tech. Labs
Endevco Corp.
Fairchild Conts. Corp.
Foxboro Co.
Genisco Inc.
Giannini & Co.
Graydon Smith Prods.
Hagan Chem. & Controls
Hart Associates
Hathaway Instr.
Helco Products
Humphrey, Inc.
Industrial Electronics
Kistler Instr. Co.
Kollsman Instr. Corp.
M B Mfg. Co.
Manning, Maxwell, & Moore
Martin-Decker Corp.
Med. Electronics Devel.
Midwestern Geophysical
Monarch Radio
Nankervis Co.
Naybor Labs.
Norden-Ketay Corp.
Northam Electronics
Norwood Controls
Optronic Co.
Pace Engrg. Co.
Phillips & Hiss
Photocon Res. Prods.
Pickering & Co.
Polyphase Instr.
Propulsion Devel. Lab.
RCA
Rahm Insts., Inc.
Reed & Reese, Inc.
Sanborn Co.
Servomechanisms Inc.
Servonic Instruments
Shand & Jurs Co.
Sheffield Corp.
Southw. Ind. Electronics
Sperry Products
Standard Controls, Inc.
Statham Labs.
Swartwout Co.
Taber Instr. Corp.
Task Corp.
Trans-Sonics, Inc.
Ultradyne Engrg. Labs.
Wiancko Engrg. Co.

PRESSURE RECORDERS, including Manometer Type

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American Paulin
Autom. Timing & Controls
B-I-F Industries
Bacharach Indust. Instr.
Bailey Meter Co.
Baldwin-Lima-Hamilton
Barton Instr.
Beckman & Whitley
Bendix Aviation Corp.
Berkeley Div.
Bourns Labs.
Bridgeport Thermostat
Bristol Co.
Builders-Providence
Burton Mfg.
Century Instr. Co.
Consolidated Avionics
Consol. Electrodynamics
Cook Electric
Crosby Steam Gage
Datran Electronics
Defender Instr. & Reg.
Dickson Co.
Electric Auto-Lite
Engineering Res. & Devel.
Epic, Inc.
Esterline-Angus
Fischer& Porter Co.
Foxboro Co.
General Controls
General Mills
Giannini & Co.
Gilmore Industries
Gordon Co., Claud S.
Gorrell & Gorrell
Gotham Instr. Co.
Hagan Chem. & Controls
Hamilton Watch
Hays Corp.
Ideal-Aerosmith
Impact Register Co.
Improved Gauge Mfg. Co.
Industrial Instr. Corp.
Kahl Scientific Instr.
Kenyon Instr. Co.
Leeds & Northrup
Manning, Maxwell & Moore
Marsh Corp., Jas. P.
Martin-Decker Corp.
Mason-Neilan Div.
Matisa Equipt. Corp.
Minneapolis-Honeywell
  Indust. Div.
Moeller Instr. Co.
Moore Products
Nankervis Co.
Penn Insts. Div.
Powers Reg. Co.
Republic Flow Meters
Sanborn Co.
Schaevitz Engineering
Scientific Instr. Co.
Sheffield Corp.
Simplex Valve & Meter Co.
Sparling Meter Co.
Stoelting Co.
Streeter-Amet
Summers Gyroscope
Swartwout Co.
Taller & Cooper
Taylor Instr. Cos.
Thrush & Co.
Topp Industries
Trerice Co.
Uehling Instr. Co.
U. S. Gauge Div.
Weksler Thermom. Corp.
Weston Electcl. Instr.

PRESSURE RECORDERS, Electrical-resistance

Ace Electronics
Aeroquip Corp.
Allegany Instr. Co.
Allied Products Div.
Atlantic Research
Baldwin-Lima-Hamilton
Barber-Colman
Bourns Labs.
Bristol Co.
Cons. Electrodynamics
Electronic Engrg. Assocs.
Fischer & Porter
Foxboro Co.
Gilmore Industries
Hamilton Watch
Indikon Co.
Indust. Instr. Co.
Kybernetes Corp.
Larson Instr. Co.
Martin-Decker Corp.
Republic Flow Meters
Streeter-Amet
Swartwout Co.
Taber Instr. Corp.
Weston Electcl. Instr.

PRESSURE RECORDERS, Piezoelectric

Allied Products Div.
Atlantic Research
Brush Electronics
Chesapeake Instr. Corp.
Control Devices, Inc.
Endevco Corp.
Kistler Instr. Corp.
Massa Labs.
RCA Div.

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Bacharach Indust. Instr.
Bailey Meter Co.

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400
500
600
700
800
900
1000

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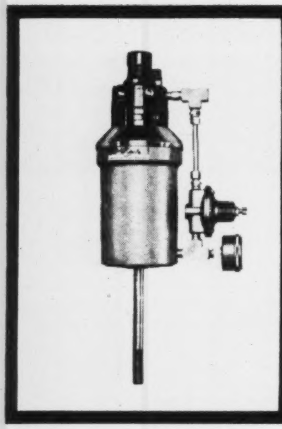

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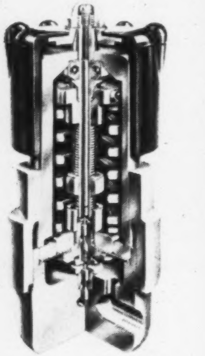
HIGH
PRESSURE
REGULATORS



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Fischer & Porter Co.
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Gilmore Industries
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Statham Labs.
Streeter-Amet
Summers Gyroscope
Thwing-Albert
Trimount Instr. Co.
Yellow Springs Instr. Co.

PRESSURE REDUCING VALVES, see Valves, Pressure Reducing and/or Backpressure

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Airmatic Valve, Inc.
Amer. Meter Co.
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Askania-Werke, A. G.
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Cutler-Hammer
Davis Reg. Co.
Dynamics Res. Assoc.
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Fischer & Porter Co.
Fisher Governor
Foster Engrg. Co.
Fulton Sylphon Div.
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General Regulator
Greiner, Emil
Grove Valve & Reg. Co.
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Hoke, Inc.
Johnson Service Co.
Jordan Corp., Div.
Kahle Engrg. Co.
Kaye & MacDonald
Keckley Co., O. C.
Kieley & Mueller
Klipfel Valves
Kollsman Instr. Corp.
Leonard Inc., Wallace O.
Leslie Co.
Linde Co.
Manning, Maxwell & Moore
Manostat Corp.
Mason-Neilan Div.
McAlear Mfg. Co.
McDonnell & Miller
Micromat Co.
Minneapolis-Honeywell
  Indust. Div.
Moore Products
Mueller Co.
National Pneumatic Co.
Natural Gas Equipt. Co.
Norden-Ketay
Norgren Co.
Powers Reg. Co.
Propulsion Devel. Labs.
R. K. L. Valve & Mfg. Co.
Reliance Instr. Mfg. Corp.
Republic Flow Meters
Research Controls
Reynolds Gas Reg. Co.
Robertshaw-Fulton, Aero
Robbins Aviation
Rockwell Mfg. Co.
Sarco Co., Inc.
Schade Valve Mfg. Co.
Schrader's Son, A.
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Seely Instr. Co.
Squires Co.
Stratos Div.
Taylor Instr. Cos.
Todd Scientific
Trerice Co.
United Electric Controls
Vapor Recovery Systems
Wallace & Tiernan
Warren Engrg.
Watts Reg. Co.
Westinghouse Air Brake
Weston Elect. Inst. Corp.

PRESSURE RELIEF, Rupture Discs

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Amer. Instr. Co.
Amer. Meter Co.
Autoclave Engrs.
Baker & Co.
Bendix-Freiz
Black, Sivalls & Bryson
Frangible Discs, Inc.
Henry Valve Co.
High Pressure Equipt. Co.
Hoke, Inc.
Koehler Instr. Co.
Manning, Maxwell & Moore
Pressure Prods. Industries
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PRESSURE RELIEF VALVES, see Valves, Relief

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Amer. Meter Co.
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Autoclave Engrs.
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Dahl & Co.
Douglass Automatic
Fischer & Porter Co.
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Republic Mfg. Co.
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Sprague Engrg. Corp.
Trerice Co., H. O.
Weksler Thermom. Corp.
Westinghouse Air Brake

PRESSURE STANDARDS, see Standards, Pressure

PRESSURE SWITCHES, see Switches, Pressure

PRESSURE TESTING DEVICES, High Pressure (Above 1000 psig.)

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Allied Products Div.
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Ashton Valve Co.
Autoclave Engrs.
Bacharach Indust. Instr.
Bailey Meter Co.
Baldwin-Lima-Hamilton
Bourns Labs.
Bristol Co.
Builders-Providence
Carver, Fred S.
Chatillon & Sons
Colvin Labs.
Cook Electric
Crosby Steam Gage
Dickson Co.
Dillon & Co.
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Kahn & Co.
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Martin-Hubbard Corp.
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Pioneer Instr. Co.
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RCA Div.
Refinery Supply Co.
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Scientific Instr. Co.
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Taylor Instr. Cos.
Trerice Co.
United Electric
U. S. Gauge Div.
Weksler Thermom. Corp.
Wiancko Engrg. Co.

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Automatic Control
B-I-F Industries
Bailey Meter Co.
BJ Electronics
Bendix Aviation Corp.
Bendix, Eclipse-Pioneer
Bristol Co.
Burton Mfg. Co.
Century Electronics
Chesapeake Instr. Corp.
Colvin Labs.
Control Components Co.
Datran Electronics
Dayton Instr. Inc.
Decker Aviaton Corp.
Dynamic Instr. Co.
Edison, Inc., Thomas A.
Fairchild Conts. Corp.
Fischer & Porter Co.
Foxboro Co.
Genisco Inc.
Giannini & Co.
Hagan Chem. & Controls
Hays Corp.
Healy-Ruff
Helco Products
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Manning, Maxwell & Moore
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Minneapolis-Honeywell
Norden-Ketay Corp.
Pace Engrg. Co.
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Scientific Instr. Co.
Servonic Instruments
Shand & Jurs
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Sparling Meter

When Using This Guide look under the variable, e.g., Pressure Gages (not Gages, Pressure); or look under the noun—Magnets, Permanent (not Permanent Magnets).

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500
1000
1500
2000
2500
3000
3500
4000
4500
5000

The gauge that has everything!

- **LEAK-PROOF ONE-PIECE CONSTRUCTION** . . . bourdon tube fused to socket and tip by exclusive "Conoweld" process.
- **STURDY "MARSHALLOY" CASE** . . . formed of boiler-plate-thickness steel, copper clad inside and outside to give it the corrosion resistance of solid copper. It's one third lighter, but four times stronger than cast iron.
- **PRECISION "MASTERGAUGE" MOVEMENT** . . . with such exclusive features as the coined sector gear.
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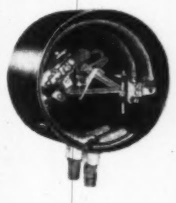
TO "MAKE" OR "BREAK" AN ELECTRICAL CIRCUIT ON CHANGES IN THE DIFFERENCE BETWEEN TWO PRESSURES



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Series BB: Operating ranges from 0-60 psi to 2,500 psi., with sensitivities varying from 0.4" to 50 psi.
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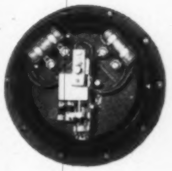

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Extremely sensitive, for air or gas. Series PQ: Operating ranges (inches of water) 6.0" vac. to 6.0" press. (sensitivity .03",) and 30.0" vac. to 30.0" press. (sensitivity 0.1" to 0.02").
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Servonic "Model H" pressure transducers retain system simplicity and high electrical output, but they offer these operational extras . . .

RUGGED	Vibration resistant – plus or minus 20 g's. – 100 to 2000 cps.
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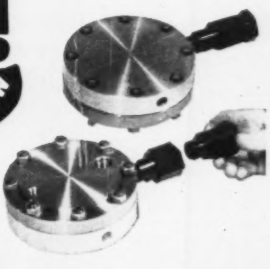
NEW
TWIN SEAL* PRODUCTS CATALOG



Features the Most Complete Line of
DIAPHRAGM SEALS

√ **Prevent corrosion or clogging of pressure instruments**

√ **Continuous duty type permits removal of instruments *under pressure***

Write today for this new 100 page, fully illustrated Twin Seal Products Catalog. You will find it helpful. Address Dept. 57

*Trademark

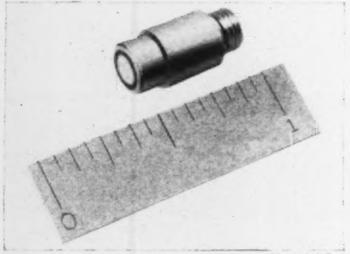
MANSFIELD & GREEN
1051 POWER AVE. CLEVELAND 14, OHIO

For more information circle **270** on inquiry card.

NEW PRODUCT NEWS

SLM
SWISS MADE

Model PZ-14



Model PZ-6

Kistler SLM Transducers measure combustion, detonation, hydraulic and pneumatic pressures precisely

Featuring extreme ruggedness, high sensitivity and fast response, the precision, Swiss-made SLM Pressure Transducers permit direct measurements of *pressure* and *rate* of pressure changes.

Providing continuous operation at steady temperatures up to 600° F, with intermittent gas temperatures on the diaphragm to above 3000° F, they give faithful response to fast or slow pressure variations in shock tubes, gun tubes, rocket motors, rocket sleds, aerodynamic models, gas turbines, diesel and gasoline engines, compressors, fuel pumps, hydraulic and pneumatic control systems.

Calibration is constant and practically independent of temperature. This is the only commercially available crystal type instrument that can be calibrated by conventional static methods.

Pressure changes generating an electrical charge in the pickup are measured by an electrostatic type Kistler amplifier and displayed on an oscilloscope. Voltage signals are about 1000 times higher than from a typical strain gage or inductive type instrument. The standard Model PZ-14 Transducer covers all pressure ranges from 0.1 psi to 3000 psi and measures full vacuum. A Kistler pickup adaptor extends this range to 30,000 psi. Response time is 15 microseconds, resolution .01 psi with linearity and repeatability better than 1% of the pressure being measured. Designed for relatively "hard-to-get-at" locations, the Sub-Miniature Model PZ-6 Transducer achieves response times to one microsecond. A new electrostatic feedback amplifier is available for use with this type pickup.

The SLM Pressure Pickup, combined with special low-noise cables and a Kistler Piezo-Calibrator-Amplifier (required to couple pickups to oscilloscopes or recorders) constitutes the Kistler SLM Pressure Indicator. For complete information, request Bulletins PI-114, PZ-14 and PZ-6.

Kistler Instrument Corp., Dept. AN, 15 Webster St., North Tonawanda, N. Y.

For more information circle **271** on inquiry card.

Sparton Cont. Systems
Statham Labs.
Swartwout Co.
Taber Instr. Corp.
Ultradyne Engrg. Labs.
Water Level Controls

PRESSURE TRANSMITTERS, Pneumatic Output

Airflow Instr. Co.
Amer. Meter Co.
Askania Regulator
Askania-Werke, A. G.
Assoc. Valve & Engrg.
B-I-F Industries
Bailey Meter Co.
Black, Sivalls & Bryson
Bristol Co.
Conoflow Corp.
Fischer & Porter Co.
Foxboro Co.
Hagan Chem. & Controls
Hays Corp.
Indust. Instr. Corp.
Instruments, Inc.
King Engrg. Corp.
Leslie Co.
Manning, Maxwell & Moore
Mason-Neilan Div.
Minneapolis-Honeywell
  Indust. Div.
Moore Products
Penn Insts. Div.
Republic Flow Meters
Scientific Instr. Co.
Simplex Valve & Meter
Taylor Instr. Cos.
U. S. Gauge Div.
Westinghouse Air Brake

PRIMARY ELEMENTS, see Object of Measurement, e.g. Flow, Displacement, etc.

PRINTED CIRCUITS, see Circuits, Graphic

PRINTERS, Numerical Data, including Data Loggers, High Speed Printers, Typewriters, etc. (see also Data Processing)

Acromark Co.
Aero Electronics
Alden Electron & Impulse
ANelex Corp.
Austin Co.
Basic Controls, Inc.
Bendix-Pacific
Benson Lehner Corp.
Berkeley Div.
Carroll Co.
Clary Corp.
Commercial Controls Corp.
Consolidated Avionics
Control Specialty Corp.
Daystrom Systems
Detectron
Electro Instruments
Electronic Contr. Systems
Epsco, Inc.
Fischer & Porter Co.
Franklin Electronics
Friden Calc. Mach. Co.
Giannini, Datex Div.
Gilmore Industries
Hanson-Gorrill-Brian
Hewlett-Packard
Hycon Electronics
Indust. Electronic Engrs.
Intelex Systems
Internat. Business Machs.
Kleinschmidt, Inc.
Lab. for Electronics
Landis & Gyr
Larson Instrument
Monroe Calc. Mach. Co.
Moseley Co.
North Amer. Phillips
Olympic Development
Optronic Co.
Panellit, Inc.
Potter Instr. Co.
Probescope Co.
Radiation, Inc.
Radiation Instr. Dev. Lab.
Ransom Research
Raycon Corp.
Remington-Rand Univac
Royson Engrg. Co.
Shand &Jurs Co.
Shepard Labs.
Special Insts. Lab.
Streeter-Amet
Systron Corp.
Taller & Cooper
Telecomputing Corp.
Teletype Corp.
Ultrasonic Corp.
Westronics, Inc.

PRISMS, Optical, see Optical Parts

PROBES, High Voltage

Aerolite Electronics
Ampco Mfg. Co.
Berkeley Div.
Chicago Indust. Instr.
Coaxial Connector Co.
Cornell-Dubilier
Davenport Mfg.
Del Electronics Co.
DuMont Labs., Allen B.
Hickok Elec. Instr.
Industrial Insts., Inc.
Instrument Tool & Engrg.
Jennings Radio Mfg. Corp.
Lab-Tronics
Phaostron Co.
Philco Corp.
Precise Measmts. Co.
Precision Apparatus Co.
Radio City Prods. Co.
Radio Corp. of Amer.
Simpson Electric

Slaughter Co.
Teletronics Labs., Inc.
Yonkers Industs., Inc.

PROBES, High Frequency

Admittance-Namco
Aerolite Electronics
Ampco Mfg. Co.
Berkeley Div.
Boonton Electronics
Chicago Indust. Instr. Co.
Coaxial Connector Co.
Cornell-Dubilier
Defiance Engrg. & Mcrwv.
DeMornay-Bonardi
DuMont Labs., Allen B.
F-R Machine
Hickok Elec. Instr.
Hycon Electronics
Instruments Inc.
Jennings Radio Mfg. Co.
Kay Electric
Lab-Tronics
Phaostron Co.
Precision Apparatus Co.
Precision Tube Co.
Radio City Prods. Co.
Radio Corp. of Amer.
Sierra Electronic Corp.
Simpson Electric
Sweets Co., Martin
Teletronics Labs., Inc.
WacLine, Inc.
Waterman Products
Weinschel Engrg. Co.
Yonkers Indust., Inc.

PROCESS CONTROLLERS, see Control Systems, Process

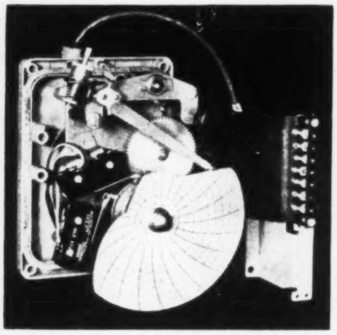
PROCESS TIMING INSTRUMENTS, see Timers, Automatic Process (see also Program Controllers)

PROFILE RECORDERS, Roughness, Waviness, etc., see Dimensional Gages

PROGRAM CLOCKS, see Timers, Automatic Process

PROGRAM CONTROLLERS

AMP, Inc.
A'G'A Div.
Abrams Instr. Co.
Alabama Automation
Allen-Bradley
Amer. Electronic Mfg.
Amer. Kloeckner-Moeller
Amer. Timer Corp.
Amglo Corp.
Autom. Control Co.
Autom. Elect. Mfg. Co.
Autom. Timing & Controls
B-I-F Industries
BJ Electronics
Bailey Meter Co.
Baldwin-Lima-Hamilton
Barber-Colman
Beattie-Coleman
Bendix-Friez
Black, Sivalls & Bryson
Bristol Co.
Cal-Tronics Corp.
Chrono-Log Corp.
Cincinnati Time Rec. Co.
Clare & Co.
Cleveland Fuel Equip.
Consolidated Avionics
Controls, Inc.
Counter & Control Corp.
Cramer Controls Corp.
Cutler-Hammer
Dahl & Co., G. W.
Datascan, Inc.
Daystrom Instruments
Daystrom Systems
De-Tec-Tronic Corp.
Dietz Co., G. W.
Eagle Signal Corp.
Edison Elect. Prods.
Electric Hotpack Co.
Electronic Controls
Electro-Physics Co.
Elgin Natl. Watch
Emmett Machine
Ferrara, Inc.
Fielden Instr. Div.
Electric Switch Corp.
Fisher Governor
Foxboro Co.
Fischer & Porter Co.
Fuel Watchman
G V Controls Inc.
Fredericks Co., Geo.
General Controls Co.
GE, Apparatus Sales
Gotham Instr. Div.
Guardian Electric Mfg.
Hagan Chem. & Controls
Haledy Electronic Co.
Hailikainen Insts.
Haydon Mfg. Co.
Healy-Ruff
Hillyer Instr. Co.
Industrial Control Panel
Industrial Timer
Haydon Co., A. W.
Internat. Business Machs.
International Register
Johnson Service Co.
Leeds & Northrup
Lumenite Electronic
Mason-Neilan Div.
Miller-Harris Instr. Co.
Minneapolis-Honeywell
  Indust. Div.
Montgomery Mfg.
National Controls
National Time & Signal
Newmatic Corp.
North Electric
Northwestern Clock
Panellit, Inc.



BAILEY
PROGRAM
CONTROLLER

- Positions a pneumatic transmitter in accordance with time/amplitude function of a 6-inch diameter cam. This establishes a pneumatic signal which is used as a set point signal to adjust an external control relay.

The "plug-in" Program Controller and its pneumatic transmitter may be installed in the same case with one or two electronic or pneumatic receivers.

The Bailey Program Controller also drives a recording pen to record the cam program for comparison on the same chart with the controlled variable.

Request Product Specification E99-6

BAILEY METER COMPANY
1041 IVANHOE ROAD CLEVELAND, O.
Bailey Meter Company Ltd., Montreal, Canada

For more information circle **272** on inquiry card.

Paragon Electric
Partlow Corp.
Perfex Controls Div.
Photographic Products, Inc.
Photovolt Corp.
Potter Instr. Co.
Powers Reg. Co.
Pratt & Whitney
Production Instr. Co.
Rhodes, Inc.
Sangamo Electric
Seely Instr. Co.
Seth Thomas Clock
Shand & Jurs
Soreng Products
Std. Elect. Time Co.
Stoelting Co.
Stromberg Time Corp.
Struthers-Dunn
Taylor & Co., W. A.
Taylor Instr. Cos.
Telechron, Inc.
Thordarson Elect. Mfg.
Tork Clock
Vocaline Corp.
Walkirt Co.
Wallace & Tiernan
Walser Auto. Timer
Ward Leonard
Warner & Swasey Res.
West Instr. Corp.
Weston Electcl. Instr.
Wheelco Instr. Div.
White-Rodgers
Wilson & Co., G. C.
Yellow Springs Instr.
Zenith Electric

PROJECTORS, Film Slides, Lantern Slide and Opaque Object

Aloe Co., A. S.
Amer. Measuring Insts.
Amer. Optical
Bausch & Lomb
Bell & Howell
Beseler Co.
Bolsey Corp.
Buhl Optical
Burke & James
Burton Mfg. Co.
Bushnell Co., D. P.
Davisdson Mfg. Co.
Dukane Corp.
E & S Optical
Eastman Kodak Co.
Eberbach & Son
Edmund Scientific
Epic Inc.
Ercona Corp.
Fish-Schurman
G-M Labs.
Gen. Biological Supp.
Gordon Enterprises
Gurley, W. & L. E.
International Devel. Co.
Jarrell-Ash

Lafayette Instr. Co.
Leitz, Inc.
Pfaltz & Bauer
RCA Div.
Stocker & Yale
Sylvania Elec. Prods.
Tarc Electronics
Vectron, Inc.
Williams, Brown & Earle
Zeiss, Inc., Carl

PROJECTORS, Industrial Inspection

Amer. Optical
Bausch & Lomb
Beseler Co.
Blonder-Tongue Labs.
Buhl Optical
Corbett Science Labs.
DoAll Co.
Eastman Kodak Co.
Eberbach Corp.
Edmund Scientific
Engineers' Specialties Div.
Engis Equipt. Co.
Ercona Corp.
Gordon Enterprises
Hirschmann Co.
Instrumentation Assoc.
International Devel. Co.
Lab. Optical Co.
Lafayette Instr. Co.
Leitz Inc.
Mason Instr. Co.
Opplem Co.
Optical Gaging Prods., Inc.
Opto-Metric Tools
Pan-Technics, Ltd.
Portman Instr. Co.
Scherr Optical Tools
Sheffield Corp.
Stocker & Yale
Testa Mfg. Co.
Unertl Optical
Whittington Pump & Engrg.
Wilder, Inc.
Zoomar Corp.

PROJECTORS, Micro

Amer. Measuring Insts.
Applied Research Labs.
Bausch & Lomb
Buhl Optical
Brinkmann Instruments
Central Scientific
Eberbach Corp.
Ercona Corp.
Ferner Co.
Fish-Schurman
Genl. Biological Supp.
Gordon Enterprises
Graf-Apsco
Internat. Devel. Co.
Internat. Mircoscope
Jarrell-Ash
Jones & Lamson
Leitz, Inc.

Mine Safety Appliances
National Instr. Co.
Opplem Co.
Opto-Metric Tools
Palos Optical Co.
Pfaltz & Bauer
Portman Instr. Co.
Scherr Optical Tools
Stocker & Yale
United Scientific
Victor Animatograph Corp.
Whittington Pump & Engrg.
Wilder, Inc.
Ziess Inc., Carl

PROJECTORS, Optical, including Color Film
ACF Electronics
Amer. Optical
Askania-Werke A. G.
Avion Div.
Bausch & Lomb
Bell & Howell
Belock Instr.
Beseler Co.
Bray Optical
Bronoptics Co.
Buhl Optical
Burke & James
Dukane Corp.
Eastman Kodak Co.
Engis Equipt. Co.
Ercona Corp.
G-M Labs.
Genl. Biological Supp.
Genl. Prec. Lab.
Gordon Enterprises
Graf-Apsco
Helio Instr. Co.
Jarrell-Ash
Leitz, Inc.
Lovins Engrg. Co.
Maurer, Inc., J. A.
Opplem Co.
Pan-Technics, Ltd.
RCA Div.
Schneider-Cogswell
Tarc Electronics
Unertl Optical
Victor Animatograph Corp.
Wilder, Inc., R. S.
Williams, Brown & Earle
Williamson Devel. Co.
Wollensak Optical
Zenith Optical Lab.
Zoomar Corp.

PROJECTORS, Oscillogram
Beattie-Coleman
Consol. Electrodynamics
Corbett Science Labs.
Gordon Enterprises
International Devel. Co.
Radioactive Products Co.
Telecomputing Corp.

PROJECTORS, Rectifying
Abrams Instr. Co.
Bausch & Lomb
Fecker, Inc., J. W.
Gordon Enterprises

PRONY BRAKES, Hydraulic
Post Co., Frederick
GE, Apparatus Sales
Taylor Dynamometer

PROPELLER TEST STANDS
Acme Gauge
Airplane Mfg. & Supply
Baldwin-Lima-Hamilton
Berkeley Div.
Brown & Sharpe
Falstrom Co.
Gadgets Inc.
Gilmore Industries
Industrial Engrg. Corp.
Kahn & Con.

PROPORTIONING PUMPS, see Pumps, Metering and Proportioning

PROSPECTING INSTRUMENTS, see Geophysical

PROTRACTORS, Bevel, see Drawing Instruments

PROTRACTORS, Course, see Navigational Instruments

PROTRACTORS, Navigator's, see Navigational Instruments

PROTRACTORS, Transparent, see Drawing Instruments

PROVERS, Gas Meter, see Flow Provers

PROVING RINGS, see Testing Machine Calibrators

PSYCHOLOGY LABORATORY APPARATUS (see also Polygraphs)
Amer. Electronic Labs.
Associated Research
Baird-Atomic
Brush Electronics
Electro-Medical Lab.
Electro-Physics Co.
Electrosig Corp.
General Radio Co.
Gorrell & Gorrell
Hunter Mfg. Co., Inc.
Industrial Control Co.
Instrumentation Assoc.
Lab-Tronics
Lafayette Instr. Co.
Macbeth Corp.
Martin-Hubbard
Medical Electronics Dev.
Nelson Instr. Co.
Phipps & Bird
Scott, Hermon H.
Stoelting Co.
U. S. Testing Co.
Yellow Springs Instr. Co.

PSYCHROMETERS, see Humidity Instruments, Psychrometric

PUBLIC HEALTH TESTING EQUIPMENT
Aloe Co., A. S.
Amer. Optical Co.
Amer. Scientific
Anton Electronic Labs.
Applied Research Labs.
B-I-F Industries
Burton Mfg. Co.
Central Scientific
Chicago Apparatus Co.
Corning Glass Works
Electric Hotpack Co.
Electric Scient. Co.
Fisher Scientific
Genl. Biological Supp.
Greiner, Emil
Hellige, Inc.
Hill & Co., E. Vernon
Industrial Control Co.
Instrument Dev. Labs.
Instrumentation Assoc.
Kontes Glass
LaMotte Chem. Prods.
Lennard Co.
Lumenite Electronic
Menlo Research Lab.
Mine Safety Appliance
Owens Illinois
Phipps & Bird
Phoenix Prec. Inst.
Photovolt Corp.
Precision Scientific
Radiation Instr. Dev. Lab.
Research Appliance Co.
Rubicon Co.
Scientific Glass App.
Scott, Hermon H.
Taylor & Co., W. A.
Ultra-Violet Prods.
Victoreen Instr. Co.
Wallace & Tiernan, Inc.

PULP TESTERS, see Paper and Pulp Testing

PULSATION DAMPERS, see Pressure Snubbers

PULSE GENERATORS, see Generators, Pulse

PULSE TRANSFORMERS, see Transformers, Pulse

PULVERIZED MATERIALS MEASUREMENTS, see Particle Instruments

PUMICE
Dixon, Inc.
Jadow, Inc.
King-Malcolm
Rhodes & Co.
Wagner Co., Inc., C. A.

PUMP GOVERNORS, including Regulators
Acme Reg. Co.
AiResearch Mfg. Co.
Allen-Bradley
Area Regulators, Inc.
Askania Reg. Co.
Askania-Werke, A. G.
Assoc. Valve & Engrg.
Atlas Valve Co.
Autom. Control Co.
Autom. Timing & Controls
B. W. Controller Corp.
Bailey Meter Co.
Bastion-Blessing
Beck Co.
Bendix-Friez
Black, Sivalls & Bryson
Block Mfg. Co.
Boekel & Co.
Boylston Co.
Bristol Co.
Builders-Providence
Cash Co., A. W.
Cash Valve Mfg. Corp.
Climax Div.
Conoflow Corp.
Continental Foundry
Controls Corp. of Amer.
Cooper Co., Clark
Cutler-Hammer
Davis Reg. Co.
Detroit Lubricator
Eclipse Fuel Engrg. Co.
Engelhard, Inc., Charles
Farris Engrg. Co.
Fischer & Porter Co.
Fisher Governor
Ford Reg. Valve Co.
Foster Engrg. Co.
Foxboro Co.
Fulton Sylphon Div.
Furnas Electric
Gas Appliance Spec.
General Controls
GE
General Regulator
Grove Valve & Reg.
H-B Instr. Co.
Hagan Chem & Controls
Hammel-Dahl
Hays Corp.
Henszey Co.
Hoke, Inc.
Ideal Lab. Tool Corp.
Industrial Instr.
Jack Scientific Co., Bill
Johnson Service Co.
Jordan Reg. Co.
Keckly Co., O. C.
Kaye & MacDonald
Kendall Controls Corp.
Kieley & Mueller
Klipfel Valves
Kollsman Instr. Co.
Lammert & Mann
Lapp Insulator
Leslie Co.
Linde Co.
Lumenite Electronic
Magnetic Instr. Co.
Manning, Maxwell & Moore
Marsh Corp.
Mason-Neilan Div.
McAlear Mfg. Co.
McDonnell & Miller, Inc.
Mercoid Corp.
Mercon Reg. Co.
Minneapolis-Honeywell
Moore Products
Natural Gas Equipt. Co.
Norgen Co., C. A.
North Amer. Mfg. Co.
Northern Equipt. Co.
Partlow Corp.
Penn Insts. Div.
Photoswitch, Inc.
Powers Reg. Co.
Preferred Utilities Mfg.
Republic Flow Meters
Research Controls
Reynolds Gas Reg. Co.
Sarco Corp.
Schade Valve Mfg.
Schutte & Koerting
Seely Instr. Co
Selas Corp.
Shallcross Controls
Sprague Meter Co

Spence Engrg. Co.
Squires Co.
Swartout Co.
Taylor Instr. Cos.
Trerice Co.
Union Switch & Signal
United Electric
Warren Engrg. Co.
Warrick, Chas. F.
Water Level Controls
Waukee Engrg.
Weston Electcl. Instr.
White-Rodgers
Yellow Springs Instr. Co.

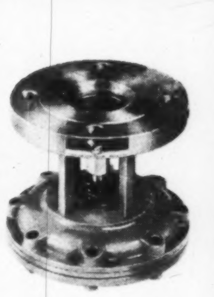
PUMPS, Compressed Air, see Air Compressors

PUMPS, Glass Cylinder and Piston Type
Bel Art Products
Everett Products
Fairbanks, Morse & Co.
Fish-Schurman
Fredericks, George E.
Glasscraft Co.
Kinney Mfg. Div.
Kontes Glass
Lapp Insulator Co.
Lear, Inc.
National Instr.
Neptune Pump Mfg.
Phila. Pump & Machy.
Prec Glass Prod. Co.
Schaar & Co.

PUMPS, High Vacuum, see Vacuum Apparatus

PUMPS, Hydraulic Control
Adel Prec. Prods.
Amer. Instr. Co.
Askania Reg. Co.
Autoclave Engrs.
Barnes Co. W. F. & J.
Bendix, Eclipse-Pioneer
Bendix-Pacific
Brown & Sharpe
Denison Engrg. Co.
Dusenbury Co.
ECO Engrg. Co.
Eastern Industs., Inc.
Fairbanks, Morse & Co.
Ingersoll-Rand
Lapp Insulator Co.
Lear, Inc.
Ledeen Mfg. Co.
Logeman, C. W.
Pesco Products
Phila. Pump & Machy.
Precision Scientific
Pressure Prods. Industries
R. K. L. Valve & Mfg.
Rivett Lathe & Grinder
Rockwell Mfg. Co.
Roy Co., Milton
Schaar & Co.
Shallcross Controls
Sundstrand Machine Tool
Vickers, Inc.
Worthington Corp.

PUMPS, Laboratory, High Pressure (25000 psig.)
Amer. Instr. Co.
Autoclave Engrs.
Central Scientific Co.
Cooper Co., Clark
Fisher Scientific
High Pressure Equipt. Co.
Hills-McCanna
Lap Insulator Co.
Ledeen Mfg. Co.
Logeman Co., C. W.
Phila. Pump & Machy.
Pressure Prods. Industries
Proportioneers Inc.
Roy Co., Milton
Ruska Instr. Corp.
Schaar & Co.
Sprague Engrg. Corp.
Specialties Inc.
Welch Mfg. Co., W. M.



CONOFLOW PRESSURE and LIQUID LEVEL TRANSMITTER

The Conoflow Model "P" Transmitter is a rugged instrument capable of measuring pressure or liquid level, and transmitting a *linear* 3-15 psi signal to a suitable recorder. No dip tubes, floats, or other mechanical devices are required inside the tank. Can be used for many services, on either open or closed vessels. Ideal for viscous fluids or materials which solidify in the static lines of pressure elements of conventional transmitters.

Available for measuring ranges from as low as 0 to 100" of water or pressures as high as 250 psi. Utilizes a corrosion-resistant Inconel X diaphragm suitable for temperatures to 450° F. Measured material cannot penetrate air lines. Safety shut-off feature available. Ranges easily changed in the field.

Cono-Controls
FOREMOST
IN FINAL CONTROL ELEMENTS

Write for Bulletin P-2520-3, today. CC714

CONOFLOW CORPORATION
SUBSIDIARY OF WALWORTH COMPANY
2100 ARCH STREET • PHILADELPHIA 3, PA.

For more information circle **273** on inquiry card.

MARSHALLTOWN

DIAPHRAGM GAUGE

For Accurate Pressure Measurement in Ounces or Inches of Water

3
6
9
12
15
OUNCES

Marshalltown Figure 83 is an extremely sensitive gauge that uses a carefully seasoned bronze diaphragm to accurately measure very low pressures. It is used extensively on many types of natural gas installations for checking low pressures.

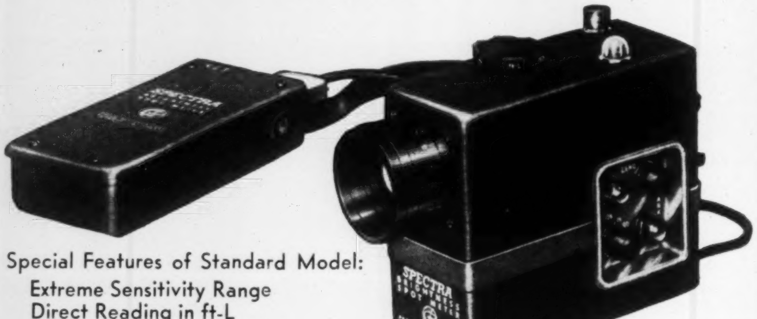
Write for details and price. LOOK TO MARSHALLTOWN FOR ONE OF THE MOST COMPLETE LINES OF INDICATING PRESSURE GAUGES MADE!

Available in standard dials (reading in inches of water) 0-15" -0-30" -0-60" -0-100" -0-160" . . . also in ounce graduated dials from 15 ounces to 5 pounds. 2½", 3½" and 4½" dial sizes mounted in black enameled steel case.

MARSHALLTOWN MANUFACTURING CO.

MARSHALLTOWN 3, IOWA

For more information circle **274** on inquiry card.



SPECTRA® BRIGHTNESS SPOT METER

Special Features of Standard Model:
- Extreme Sensitivity Range
- Direct Reading in ft-L
- Locking Microammeter
- Focusing 5' to ∞
- Small Angle

Other Models Available For Greater Sensitivity

DIRECT READING! All operators will obtain the same reading of the brightness of a given area.

***Spectra* Meter Now Used by:**

Lighting Engineers
Still Photography
High Speed Photography
Aircraft Industry
Electric Utilities
Architectural Firms
Motion Pictures & TV
Street & Highway Departments
Model Work
Human Engineering

Special Computer for exposure determination also available.

Write for descriptive literature, complete specifications and information applying to your particular field to:

PHOTO RESEARCH CORP.
837 No. Cahuenga Blvd. **HOLLYWOOD 38, CALIF.**

For more information circle **275** on inquiry card.

BAILEY
Electronic Pyrometer

- This indicating, recording, and controlling Bailey d-c PYROTRON Receiver Recorder is a self-balancing potentiometer which records one to four continuous temperature records on a 12 in. circular chart. It may be furnished with pneumatic or electric control. A themocouple or a radiation unit is the temperature sensitive element.

Minimum maintenance is assured by the elimination of galvanometers, millivolt meters, batteries and standard cells. A reversible electric motor, under electronic control, balances the potentiometer circuit and drives the indicating, recording, and controlling features.

Bailey PYROTRON Receiver Recorders are made up of interchangeable "plug-in" assemblies, standardized so that only a few spare parts need be carried in stock for many instruments.

Request Product Specifications E12-5 and E12-4.

BAILEY METER COMPANY
1041 IVANHOE ROAD · CLEVELAND, O.
Bailey Meter Company Ltd., Montreal, Canada

For more information circle **276** on inquiry card.

PUMPS, Metering and Proportioning (see also Flowmeters, Positive Displacement)
Amer. Instr. Co.
Amer. Meter Co.
Autoclave Engrs.
B-I-F Industries
Baltimore Biological Lab.
Bowser, Inc.
Bush Assoc., G. F.
Central Scientific
Cooper Co., Clark
Eco Engrg. Co.
Exline Engrg. Co.
Fairbanks, Morse & Co.
Gelber Co.,
Hills-McCanna
Ingersoll-Rand
Lapp Insulator Co.
Logeman Co.
Mechanical Products Corp.
Modern Metalcraft
National Instr. Co.
Neptune Pump
Phila. Pump & Machy.
Phipps & Bird
Pressure Prods. Industries
Process & Instruments
Proportioneers Inc.
R. K. L. Valve & Mfg.
Research Appliance Co.
Roots-Connersville
Roy Co., Milton
Ruska Instr. Corp.
Schaar & Co.
Shallcross Controls
Sigmamotor, Inc.
Smith Prec. Prods.
Vanton Pump & Equipt.
Wallace & Tiernan
Whitey Tool & Die

PUMPS, Vacuum, see Vacuum Apparatus

PYCNOMETERS
Ace Glass Co.
Coleman Instr. & Mfg.
Fisher Scientific
G. M. Mfg Co.
Gardner Lab.
Greiner, Emil
Greiner Glassblowing Lab.
Humboldt Mfg. Co.
Kontes Glass
Leeds & Northrup
Martin & Co.
Owens Illinois Glass
Pyrometer Instr. Co.
Rainhart Co.
Rascher & Betzold
Scientific Glass App.
Soiltest, Inc.
Specialty Glass Co.

PYRHELIOMETERS
Bristol Co.
Cambridge Instr. Co.
Eppley Lab.
G. M. Mfg. Co.
Instruments Corp.
Kahl Scient. Instr.
Leeds & Northrup
Neutronics Research
Pyrometer Instr. Co.

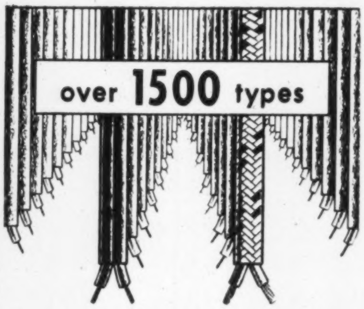
PYROMETER CALIBRATING SETS
Barber-Colman
Bristol Co.
Cambridge Instr. Co.
DeJur-Amsco
Foxboro Co.
Gray Instr. Co.
Illinois Testing Labs
Leeds & Northrup
Lewis Engrg. Co.
Minneapolis-Honeywell
Pyrometer Instr. Co.
Rubicon Co.
Servo Corp.
Technique Assocs.
Thermo-Electric Co., Inc.
Thwing-Albert
West Instr. Corp.
Weston Electcl. Instr.
Winslow Co.

PYROMETER LEAD WIRE, see Thermocouple Wire and Components

PYROMETER SUPPLIES, see Thermocouple Wire and Components

PYROMETER TUBES, see Thermowells

PYROMETERS, Electrical Resistance (see also Temperature)
Arnoux Corp.
Assembly Products
Bailey Meter Co.
Barber-Colman
Bristol Co.
Cambridge Instr. Co.
Chicago Indust. Instr. Co.
Cleveland Fuel
Dickson Co.
Electric Hotpack Co.
Electro-Tech Equip.
Engelhard Co., Inc., Chas.
Epic, Inc.
Ferner Co.
Fielden Instr. Div.
Foxboro Co.
GE, Apparatus Sales
Gilmore Industries
Gordon Co., Claud S.
Gray Instr. Co.
Greiner, Emil
Huppert Co.
Illinois Testing Labs.
J-B-T Instr., Inc.
Land-Air, Inc.
Leeds & Northrup
Lewis Engrg. Co.



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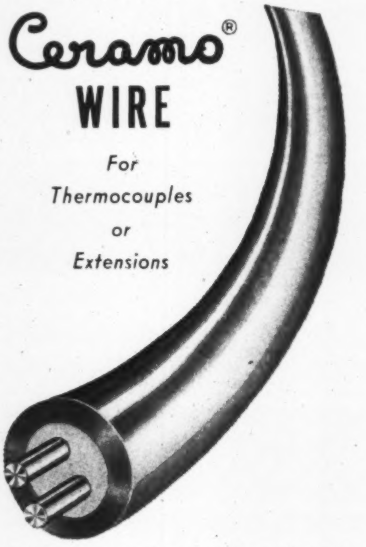
Thermo Electric makes and stocks thermocouple and thermocouple extension wire for every conceivable need—actually over 1500 different wire combinations of insulation, calibration and gage size. These include all I.S.A. types, "MIL"-Spec and T-E's versatile "Ceramo" wire.

- **All standard calibrations**
- **Gage sizes from 8 to 40**
- **Solid and stranded conductors**
- **Latest advanced insulations with temperature ratings up to 1800°F. "Ceramo" rated up to 3000°F.**
- **Hi-temp overbraid materials**
- **Multi-conductor cables**



T-E's "Ceramo" wire does the jobs too tough for ordinary thermocouple wire. "Ceramo's" construction—thermo elements and ceramic insulation encased in seamless metal sheathing —gives it unusual durability. It can be bent on an extremely small radius without shorting or grounding. Outer diameters—just .032" for single conductors and .040" for duplex conductors—permit use in "tight" spots. Larger diameters available up to 7/16".

- **All standard calibrations**
- **Temperature ratings up to 3000°F.**

Write for Wire Bulletin 31-FF

Thermo Electric Co., Inc.
Saddle Brook, New Jersey
In Canada—Thermo Electric (Canada) Ltd., Brampton, Ont.

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Check and calibrate any type of thermocouple-actuated temperature instrument with one portable Pyrotest

Read temperatures or millivolts directly . . . without graphs, charts or conversion tables

The only portable potentiometer pyrometer with interchangeable direct reading scales

Pyrotest is 9 instruments in one, with 6 standard scales for thermocouples; 3 standard scales for millivolt readings. Special scales for any desired reading or use. Scales interchangeable in 30 seconds. Compact, rugged, easy to carry—12 lbs.; 12" x 9" x 8½". Accurate to 1/6 of 1%. Self-contained power supply. Write for new bulletin 9B.

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Phen-Trols, Inc.
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Roller-Smith
Rubicon Co.
Scientific Glass App.
Servo Corp.
Shallcross Mfg.
Simpson Electric
Tell-Tronics Prods.
Thermo-Electric Co.
Thwing-Albert
Welch Mfg. Co., W. M.
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Weston Elect. Inst. Corp.
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Lewis Engrg. Co.
Partlow Corp.
Pyrometer Instr. Co.
Scientific Instr. Co.
Thwing Albert
Weston Electcl. Instr.
Wheelco Instr. Div
Wilson Elec. Inst.

PYROMETERS, Millivoltmetric

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Beede Electcl. Instr. Co.
Blue M Electric
Bristol Co.
Cambridge Instr. Co.
Cleveland Fuel
Cybertronic Corp.
De Jur-Amsco
Electric Hotpack Co.
Electro-Tech Equip.
Elematic Equipt. Corp.
Engelhard, Co., Inc., Chas.
Epic, Inc.
Ferner Co., R. Y.
Fielden Instr. Div.
Foxboro Co.
GE Apparatus Sales
Gilmore Industries, Inc.
Gordon Co., Claud S.
Gray Instr. Co.
Herman, Victor George
Howell Instr. Co.
Huppert Co.
Illinois Testing Labs.
Instrument Lab., Inc.
J-B-T Instruments
Lewis Engrg. Co.
Manning, Maxwell & Moore
Marion Electcl. Instr.
Marshall Co.
Meters, Inc.
Minneapolis-Honeywell
  Indust. Div.
Pacific Transducer Corp.
Pimex, Inc.
Prec. Thermom. & Insts.
Pyramid Instr. Co.
Pyrometer Instr. Co.
Richards Co., Arklay S.
Roller-Smith
Rubicon Co.
Sensitive Res. Instr.
Simpson Electric
Smith Co., Arthur F.
Tamms Silica Co.
Technique Associates
Thermo-Electric Co.
Thermo-Electric Mfg. Co.
Thwing-Albert
Tipp-Tronic, Inc.
Welch Mfg. Co., W. M.
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Weston Elect. Inst. Corp.
Wheelco Instr. Div.
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Bronoptics Co.
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Cambridge Instr. Co.
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Electro-Tech Equipt.
Epic, Inc.
Fielden Instr. Div.
Fisher Scientific
Gordon Co., Claud S.
Helio Instr. Co.
Herman, Victor George
Instrument Dev. Labs
Leeds & Northrup
Lewis Engrg. Co.
Mason Instr. Co.
Minneapolis-Honeywell
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Pimex, Inc.
Pyrometer Instr. Co.
Simpson Electric
Thwing-Albert

PYROMETRS, Potentiometric

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Blue M Electric
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Co-design Corp.
DeJur Amsco
Dickson Co.
Fielden Instr. Div.
Foxboro Co.
GE, Apparatus Sales
Gordon Co., Claud S.
Gray Instr. Co.
Herman, Victor George
Howell Instr. Co.
Illinois Testing Labs.
Laboratory Optical
Leeds & Northrup
Lewis Engrg. Co.
Land-Air
Manning, Maxwell & Moore
Minneapolis-Honeywell
  Indust. Div.
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Robertshaw-Fulton Co.
Rubicon Co.
Simpson Electric
Technique Assocs.
Thermo-Electric Co.
Thwing-Albert
West Instr. Corp.
Weston Electcl. Instr.
Wheelco Instr. Div.

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Barber-Colman
Barnes Engrg. Co.
Basic Controls, Inc.
Beede Electcl. Instr. Co.
Blue M Electric
Bristol Co.
Cambridge Instr. Co.
Carlingo Commodities
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Electronic Control Corp.
Electronics Corp. of Amer.
Electro-Tech Equip.
Elematic Equipt. Corp.
Engelhard, Co., Inc., Chas.
Epic Inc.
Farnsworth Electronics
Fielden Instr. Div.
Foxboro Co.
GE
Gordon Co., Claud S.
Hagan Chem. & Controls
Hanson-Gorrill-Brian
Herman, Victor George
Illinois Testing Labs.
Leeds & Northrup
Lewis Engrg. Co.
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Determines temperatures of minute spots, fast-moving objects and smallest streams—at a glance! No correction charts or accessories needed. Easy to use—weighs only 3 lbs. Special types available to show true spout and pouring temperatures of molten ferrous metal measured in open. Five stock ranges from 1400° F. to 7700° F.

Write for FREE Catalog No. 85.

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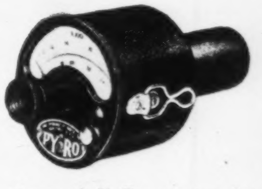
The ideal instrument for all plant and laboratory surface and sub-surface temperature measurements. Available with large selection of thermocouples and extension arms for all jobs. Designed for ruggedness and accuracy . . . it features automatic cold end compensation, large 4¾" direct reading dial and shock, moisture and dustproofed shielded steel housing. 5 stock ranges 0-300°F. to 0-1200°F.

Ask for catalog No. 168.

PYRO Radiation Pyrometer



Tells spot temperatures instantly in heat-treating furnaces, kilns forgings and fire boxes. No thermocouples, lead wires or accessories needed! Temperature indicated on direct reading dial at a press of the button. Any operator can use it. Two double-ranges from 1000° F. to 3400° F.

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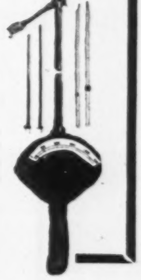
PYRO Immersion Pyrometer



The Pyro Immersion Pyrometer is shock proof, moisture proof, dust proof, immune to magnetic influences. Shielded steel housing. Instantly interchangeable thermocouples without adjustment or recalibration. Large 4" scale. Equipped with exclusive **Lock Swivel.** Ranges 0-1000 to 0-2500 F.

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The Pyrometer Instrument Co.
Bergenfield 4, New Jersey

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The Bristol line of Pyrometers includes electronic potentiometer, millivoltmeter, thermocouple, and radiation types in indicating, single-pen, two-pen, and multiple record (up to 24) models.

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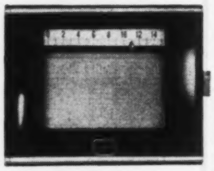

Bristol Dynamaster ® Electronic Potentiometer

BRISTOL COMPANY
112 Bristol Rd., Waterbury 20, Conn.

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Weston Elect. Inst. Corp
Wheelco Instr. Div.
Williamson Devel. Co.

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Alfax Paper & Engrg.
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Blue M Electric
Bristol Co.
Burling Instr. Co.
Burrell Corp.
Cambridge Instr. Co.
Cleveland Fuel
Cybertronic Corp.
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Electric Hotpack Co.
Electro-Tech Equip.
Electronic Prods. Co.
Electronics Corp. of Amer.
Elematic Equipt. Corp.
Engelhard, Co., Inc., Chas.
Epic, Inc.
Feller Engrg. Co.
Ferner Co.
Fielden Instr. Div.
Foxboro Co.
GE, Apparatus Sales
Gilmore Industries
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Gray Instr. Co.
Greiner, Emil
Hagan Chem. & Controls
Handley Electronics
Hanson-Gorrill-Brian
Hebler Co.
Herman, Victor George
Hoskins Mfg.
Howell Instr. Co.
Huppert Co.
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Instrument Devel. Labs.
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Kybernetes Corp.
Laboratory Specialties
Larson Instr. Co.
Leeds & Northrup
Lewis Engrg. Co.
Land-Air
Manning, Maxwell & Moore
Marshall Co., L. H.
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Orban Co., Kurt
Partlow Corp.
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Pimex, Inc.
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Pyrometer Instr. Co.
Pyrometer Service
Revere Corp.
Richards Co., Arklay S.
Robertshaw-Fulton
Roller-Smith
Rubicon Co.
Scientific Instr. Co.
Sensitive Res. Instr.
Servo Corp.
Simpson Electric
Smith Co., Arthur F.
Standard Tool & Mach.
Tamms Silica Co.
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Technique Assocs.
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Thwing-Albert
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Weston Elect. Inst. Corp.
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Wheelco Instr. Div.
Winslow Co.

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Central Scientific
Fish-Schurman
Gordon Co., Claud S.
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Precision Scientific
Pyrocones Inc.
Riehle Div.
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Clough-Brengle
Computer Co. of Amer.
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Freed Transformer
GE
Industrial Test Equipt.
Kahn & Co.
Kay Electric
Marconi Instruments
New London Insts.
Technology Instr. Div.
United Transformer

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Esco Products
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GE Lamp Div.
Glasscraft Co.
Greiner Glassblowing Lab.
Hanovia Chem. & Mfg.
Instrument Tool & Engrg.
International Optical
International Prods. Corp.
Laboratory Equipt. Corp.
Machlett & Son
Miller Labs., August E.
Palos Optical Co.
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Torrance Glass & Color
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Lord Mfg. Co.
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Mass. Gear & Tool Co.
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Pratt & Whitney
Premier Metal Prods.
Rapidan Mfg. Co.
Reflectone Corp.
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Temperature Engrg.
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Simplex Time Recorder
Suffolk Prods. Corp.
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Canoga Corp.
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DeMornay-Bonardi
Electro Impulse Labs.
F. R. Machine Works
Farnsworth Electronics
Goodyear Aircraft
Inst. Corp. of Fla.
Kaiser Aircraft & Elect.
Lab. for Electronics
Lavoie Labs.
Levinthal Electronic Prods.
Litton, Elect. Equip. Div.
Magnetic Research
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Norden-Ketay
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Stavid Engineering, Inc.
Sterling Prec. Corp.
Suffolk Prods. Co.
Sylvania Elec. Prods.
Texas Insts. Inc.
Westinghouse Electric

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BJ Electronics
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Berkeley Div.
Daytronic Corp.
Detectolab, Inc.
El-Tronics, Inc.
GE, Apparatus Sales
Georator Corp.
Instruments, Inc.
Jordan Electronics
Kybernetes Corp.
Menlo Research Lab.
Microchemical Specialties
NRD Instr. Co.
Nuclear Corp. of Amer.
Nuclear Instr. & Chem.
Nuclear Measmts. Corp.
Nuclear Research
Ohmart Corp.
Radiation Counter Labs.
Radiation Instr. Dev. Lab.
Radiation Res. Corp.
SCAM Instr. Corp.
Servo Corp. of Amer.
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United Engineers, Inc.
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Baird-Atomic
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Beckman & Whitley
Biddle Co., James G.
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Bristol Co.
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Computer Corp. of Amer.
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Eppley Lab.
F. R. Machine Works
Farrand Optical
Gaertner Scientific
General Controls Co.
Gordon Co., Claud S.
Harrison & Harrison
Hastings-Raydist
Hewlett-Packard
Illinois Testing Labs.
Jarrel-Ash
Jordan Electronics
Mt. Sopris Instr. Corp.
Narda Corp.
Perkin-Elmer
Pioneer Electronics
Polytechnic Res. & Devel.
Pyrometer Instr. Co.
Radiation Counter Labs.
Radiation Res. Corp.
Rawson Electcl. Instr.
Revere Corp.
Ruge Assocs.
Servo Corp. of Amer.
Sierra Electronic Corp.
Sperry Gyroscope Co.
Thermo-Electric Co.
Thermometer Corp.
Thwing-Albert
United Control
Universal Transistor
Victoreen Instr. Co.
WacLine, Inc.
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Amer. Mach. & Foundry
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Beacon Gage Co.
Canoga Corp.
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Inst. Corp. of Fla.
Islip Radio Mfg.
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Natl. Aircraft Corp.
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Ramo-Wooldridge
Servo Corp. of Amer.
Stavid Engineering, Inc.
Wallace & Tiernan

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Advance Electronics
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Amer. Electroneering
Berkeley Div.
Boonton Radio
Burlington Instr. Co.
Clough-Brengle
Computer Co. of Amer.
Cubic Corp.
Dale Instruments
DeJur-Amsco
Diatron Co.
Donner Scientific
Electronic Devel. Lab.
Electro Prods. Lab.
F. R. Machine Works
Federal Telephone & Radio
Feller Engrg. Co.
Ferris Instr. Corp.
Gates Radio Co.
GE
General Radio Co.
Gertsch Products
Hewlett-Packard
Hickok Electcl. Instr.
Hycon Electronics
Inst. Corp. of Fla.
Internat. Instruments
Jerrold Electronics
Jersey City Tech. Lab.
Kay Electric
Kearfott Co.
Lampkin Lab., Inc.
Lavoie Labs.
Marconi Instruments
Measurement Corp.
Meters, Inc.
Millen Mfg. Co.
Millivac Instruments
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New London Instr. Co.
Polytechnic Res. & Dev. Co.
Potter Instr. Co.
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Sylvania Elect. Prods.
Teletronics Lab.
Triplett Electcl. Instr.
Virginia Electronics
WacLine, Inc.
Walkirt Co.
Westinghouse Electric
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RADIO TUBE CHECKERS, see Tube Testers, Electron

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Can. Radium & Uranium
Maryland Etching Co.
Miller Dial & Name Pl.
Nuclear Corp. of Amer.
Photo Chemical Prods.
Sampson Chem. & Pigm.
U. S. Radium Corp.
Winn Inc., J. H.

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Bar-Ray Products
Fisher Scientific
General Chemical Div.
Instruments, Inc.
Isotope Prods. Inc.
Mitchell Rad. Prods.
NRD Instr. Co.
Norden-Ketay
Nuclear-Chicago
Nuclear Corp. of Amer.
Nuclear Research Corp.
Res. Specialties
Tracerlab Inc.
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Cyclotron Specialties
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Detectron Co.
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Douglas Radio Labs.
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GE, X-Ray Dept.
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Georator Corp.
Goldak Co.
Gulton Industries
Hallikainen Insts.
Hamner Electronics
Hansen Co., Wm.
Herbach & Rademan
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Hubb Electronics
I. L. S Instr. Corp.
Industrial Electronics
Industrial Nucleonics
Instrument Devel. Labs.
Instrument Lab.
Instruments Inc.
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Krohn-Hite Instr. Co.
Kybernetes Corp.
Landsverk Electrom.
Levinthal Electron. Prods.
Librascope, Inc.
Land-Air
Lovins Engrg. Co.
Marconi Instruments
Martin-Hubbard
Menlo Research Lab.
Mitchell Radiation Prods.
Moran Instr. Corp.
Mt. Sopris
NRD Instr. Co.
National Radiac, Inc.
New London Instr. Co.
Newark Electric Co.
Norden-Ketay
North Amer. Philips Co.
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Nuclear Devel. Lab.
Nuclear Measmts. Corp.
Nuclear Research Corp.
Nuclear Science
Nucleonic Corp.
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Packard Instr. Co.
Potter Instr. Co.
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Process & Instruments
Radiation Counter Labs.
Radiation Instr. Dev. Lab.
Radiation Res. Corp.
Radioactive Products
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Rowe Engrg. Co.
Sangamo Electric
Scientific Specialties
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Walkirt Co.
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Wood Counter Lab., N
Zenith Optical

RADIOACTIVITY STANDARDS, see Standards, Radioactivity

RADIOGRAPHY, see Flaw Detection, X-ray, also X-ray Equipment

RADIO-MICROMETERS, see Dimensional Gages, Electronic, also Thickness Gages

RADIOSONDES (see also Navigation Aids)

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Wallace & Tiernan

RADIUM DETECTORS, see Radioactivity Detectors

RADIUM HANDLING EQUIPMENT

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Bar-Ray Products
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Instruments, Inc.
MRD Instrument
Nuclear-Chicago
Radiation Counter Labs.
Tracerlab Inc.
United Engineers, Inc.
Universal Transistor
Western Radiation Lab.

RADIUM PAINT, see Luminescent Materials

RAIL TESTING MACHINES, see Flaw Detection and Flaw Detector Cars

RAIN GAGES, see Hydrologic Instruments

RAINFALL RECORDERS, see Hydrologic Instruments

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Fuess, Inc.
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Keuffel & Esser
Kollmorgen Optical
Leitz, Inc.
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Norden-Ketay
Northrop Anaheim
Parsons Co., Ralph M.
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Prec. Thermom. & Insts.
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Radio City Products
Seismograph Service Corp.
Servo Corp. of Amer.
Stafford Co.
Topp Industries
White Co.
Wild Heerbrugg

RANGE POLES, see Surveying Instruments

RATE OF CLIMB INDICATORS, see Aircraft Instruments

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RATIO CONTROLLERS, see Flow Proportioning

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REACTIVE COMPONENT INDICATORS, see Impedance Measuring Instruments

REACTIVE VOLT-AMPERE METERS, see Volt-ampere Meters, Reactive

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Triad Transf. Corp.
United States Electronics
United Transf. Corp.
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REACTORS, Saturable, see Amplifiers, Magnetic

READING LENSES, Thermometer and Burette, see Lenses, Bullseyes

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Farnsworth Electronics
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Foxboro Co.
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Hagan Chem. & Controls
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Norden-Ketay Corp.
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Farnsworth Electronics
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Consolidated Avionics
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Electro-Medical Lab.
Fischer & Porter
Internat. Business Mach.
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Larson Instr. Co.
Mid-Century Instr.
Offner Electronics
Photron Instr. Co.
Radiation Inc.
Ram Meter, Inc.
Reeves Instr. Corp.
Scientific Instr. Co.
Stoelting Co.

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ANelex Corp.
Automation Corp. of Amer.
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Bell & Howell
Bell Sound Systems
Brush Electronics
Century Electronics & Insts.
Consol. Electrodynamics
Cook Electric
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Presto Recording
RCA
Ramo-Wooldridge
Shepard Labs.
Southw. Ind. Electronic
Texas Div., Brush
Texas Insts., Inc.
Vectron, Inc.

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Bristol Co.
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Century Electronics
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Foxboro Co.
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Lab-Tronics
Larson Instr. Co.
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Manning, Maxwell & Moore
Mid-Century Instrumatic
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  Indust. Div.
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Schaevitz Engineering
Scientific Instr. Co.
Taylor Instr. Cos.
Thwing-Albert
Weston Electcl. Instr.

RECORDERS, Numerical Data, see Printers

RECORDERS, Oscillograph, see Oscillographs

RECORDERS, Potentiometer, see Potentiometers

RECORDERS, Strip Chart (see also the Object of Measurement)

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Texas Insts., Inc.
Thwing-Albert
Times Facsimile Corp.
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West Instr. Corp.
Westinghouse Electric
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RECORDERS, X-Y, see X-Y Recorders, also Curve Followers

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Potted Instr. Co.
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Sure Brothers
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Underwood Corp.

RECORDING PAPERS, see Charts

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Sylvania Elect. Prods.
Taylor Tubes, Inc.
Techn. App. Builders
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Automatic Mfg.
Bendix, Eclipse-Pioneer
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Continental Electric
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Furst Electronics
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GE, Apparatus Sales
GE, Electronics Div.
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Heller Co.
Huggins Labs.
I. T. E. Circuit Breaker
International Rectifier
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La Marche Mfg. Co.
Lambda Electronics
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Magnetic Res. Corp.
Mallory & Co., P. R.
McColpin-Christie
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Electro Prods. Labs.
Electrons, Inc.
Federal Telephone & Radio
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Furst Electronics
GE, Apparatus Sales
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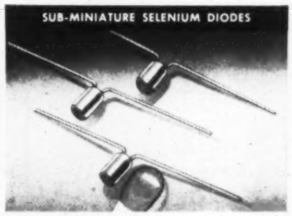

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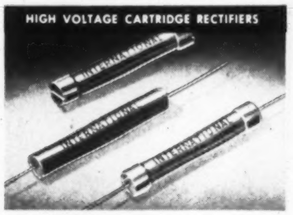
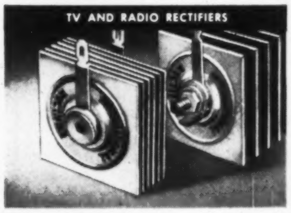


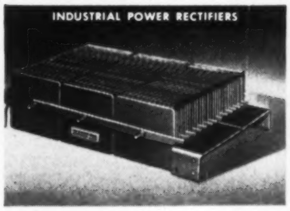
Designed for long life and reliability in Half-Wave, Voltage Doubler, Bridge, Center-Tap Circuits, and 3-Phase Circuit Types. Phenolic Cartridge and Hermetically Sealed types available. Operating temperature range: −65°C to +100°C. Specify **Bulletin H-2**

TV AND RADIO RECTIFIERS



The widest range in the industry! Designed for Radio, Television, TV booster, UHF converter and experimental applications. Input ratings from 25 to 156 volts AC and up. DC output current 50 to 1,200 MA. Write for application information. **Bulletin ER-178-A**

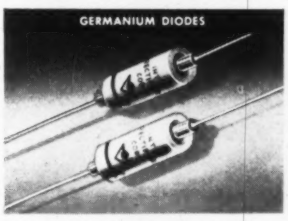
INDUSTRIAL POWER RECTIFIERS



For all DC power needs from microwatts to kilowatts. Features: long life; compact, light weight and low initial cost. Ratings: to 250 KW, 50 ma to 2,300 amperes and up. 6 volts to 30,000 volts and up. Efficiency to 87%. Power factor to 95%. **Bulletin C-349**

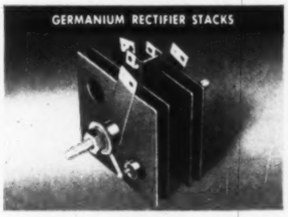
GERMANIUM

GERMANIUM DIODES



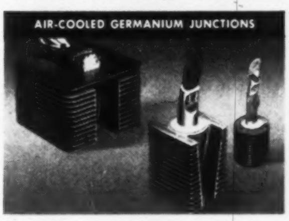
This series of general purpose, high quality point contact diodes provide excellent rectification efficiency for very high frequency applications. Special "RED DOT" series available for ambient temperatures from −55° C to +100° C. **Bulletin SR-140.**

GERMANIUM RECTIFIER STACKS



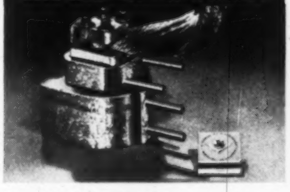
Extremely low reverse leakage values make this series ideal for magnetic amplifier applications. These units utilize 10 amp junctions—26 to 66 AC input volts rms—are available in a wide range of circuit types and DC current ratings. **Bulletin SR-148.**

AIR-COOLED GERMANIUM JUNCTIONS



Engineered for heavy power applications, these highly efficient forced air cooled units feature moisture and corrosion resistant housings. A complete series in each of 3 current ratings: 150, 330 and 500 Amperes @ 26 to 66 volts rms. Request **Bulletin GPR-2.**

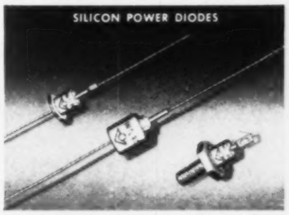
LIQUID COOLED GERMANIUM JUNCTIONS



Liquid cooled for maximum power in minimum space. Junction rating: 670 amps at 26 to 66 volts rms. Housed in high-conductivity copper cast around special steel coils. Water, oil or other accepted coolants may be used. For complete data. **Bulletin GPR-2.**

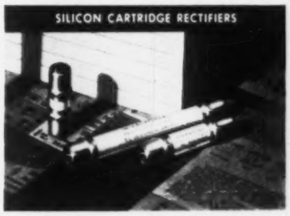
SILICON

SILICON POWER DIODES



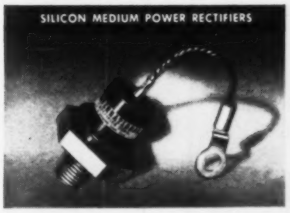
Hundreds of types in three basic styles, for operating temperatures from −55°C to +150°C. Up to 800ma DC output current per junction over a voltage range of 50 to 1,000 PIV. Hermetically sealed. For complete information on all types. **Bulletin SR-A.**

SILICON CARTRIDGE RECTIFIERS



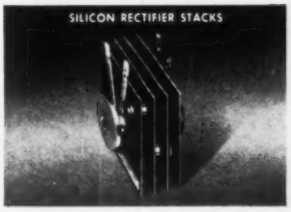
The answer to tough miniaturization problems! Ratings for high temperature applications: from 1000 volts PIV at 100ma half-wave DC output to 16,000 volts PIV at 45ma. Hermetically sealed, metallized ceramic housing. Request **Bulletin SR-139B**

SILICON MEDIUM POWER RECTIFIERS



Specifically engineered for industrial applications—the most conservatively rated silicon rectifiers in the industry! Rugged all-welded construction and hermetic sealing mean greater reliability—longer life. Types available in 3 series. Request **Bulletin SR-143B.**

SILICON RECTIFIER STACKS



These units consist of hermetically sealed junction diodes mounted on copper cooling fins, stacked to include the interconnections required for specific circuits. Junction ratings: 1.25 amps. DC output; 70 to 350 AC input volts rms. Request **Bulletin SR-137A.**

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THE WORLD'S LARGEST SUPPLIER OF INDUSTRIAL METALLIC RECTIFIERS

For more information circle **284** on inquiry card.

VHS METER-RELAY

(Very High Sensitivity)

Model 266
10 Ua DC
2800 ohms
Gasket-sealed
1¾" x 2¼"

Model 126
124V. AC
250,000 ohms
Solder-sealed
1¼" x 1⅞"

The VHS is a D'Arsonval moving coil relay, internally shock-mounted. Its operation is similar to that of indicating meter-relays.

Connections: 9-pin octal style.

Weight: 4 ounces.

Sensitivity: From 0.2 Ua to 10 Amp., 0.1 Mv to 500 volts. AC relays are rectifier type.

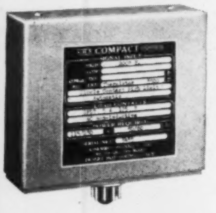
Accuracy: Trip point to 1% (depends on sensitivity). Differential and repeatability 1%.

Shock and Vibration: Operates at 10 G or more, 5 to 55 cycles. Non-operating, withstands 10 G or more, 5 to 2,000 cycles; shocks of 10 G or more.

Contacts: SPST or SPDT, 5-25 Ma DC. Other ratings to ½ Amp. AC. A locking coil gives high pressure and chatter-free contact.

Price: $20 to $80. Ask for Bulletin 104-A.

VHS COMPACTS



Cat. 2303 AH $148.50 complete

Rugged, small, complete controls. They use integral VHS meter-relays as the controlling "heart", or may use external meter-relays where indication is needed.

Accuracy: Trip point to 1% (depends on sensitivity). Differential and repeatability 1%.

Load Switch: 5 amperes, 125 volts. SPDT; make or break with increasing signal (hi), decreasing signal (lo), or both (double).

Input: From 0.2 Ua to 10 Amp., 0.1 Mv to 500 Volts. AC relays are rectifier type.

Power Required: 115/230 Volts, 50/400 cycles. DC models available.

Connections: 9 pin plug-in (octal type).

Mounting: Plug-in.

Case: 1¾" x 4¼" x 4¾", steel, dustproof. Hermetic sealing optional.

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RCA Div.
Raytheon Tube Div.
Richardson-Allen
Sylvania Eect. Prods.
Techn. App. Builders
Thermosen, Inc.
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American Inst. Co.
Beckman Instr. Div.
Cubic Corp.
Dearborn Scientific
Epic Inc.
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Federal Telephone & Radio
F. R. Machine Works
Fish-Schurman
Gardner Laboratory
GE
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Instrumentation Assoc.
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Narda Corp.
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Photovolt Corp.
Phoenix Prec. Instr.
Raypar, Inc.
Sierra Electronic Corp.
Spencer-Kennedy
Testing Machines, Inc.
Welch Mfg. Co., W. M.
Zeiss, Inc., Carl

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Airborne Instruments
Alfa Amer Corp.
Amer. Instr. Co.
Amer. Lens Co.
Amer. Optical Co.
Amglo Corp.
Bache & Co., Semon
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Bausch & Lomb
Behm & Sons
Bendix, Eclipse-Pioneer
Beseler Co.
Bray Optical
Bronoptics Co.
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Buhl Optical Co.
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Canoga Corp.
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Corning Glass Works
Crystal Research Labs.
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Dalmo Victor Co.
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International Optical
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Kearfott Co.
Keller Products
Lab. Optical Co.
Laboratory Specialties
Lampkin Labs., Inc.
Lancaster Glass
Leroy Clausing Co.
Lindly & Co.
Lynn, Robert M.
Marsco Mfg. Co.
Merry Instr. Co.
Metavac, Inc.
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Northrop Anaheim
Optical Coating Labs.
Optical Film Engrg.
Optron Laboratory
Pacific Optical
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Palos Optical
Pancro Mirrors, Inc.
Penn Optical & Inst.
Perkin-Elmer
Regal Instr. Co.
Raytheon Mfg. Co.
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Simpson Optical
Testrite Instr. Co.
Tinsley Labs.
Topp Industries
Unertl Optical
Webber Gage
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REFLECTORS, Heat Resisting

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American Lens
Amer. Optical
Bache & Co., Semon
Bausch & Lomb
Beseler Co.
Bronoptics Co.
Buhl Optical
Corning Glass Works
E & S Optical
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General Scientific
Gordon Enterprises
Haynes Stellite
Helio Instr. Co.
Internat. Devel. Co.
International Optical
Laboratory Optical
Lampkin Labs., Inc.
Lancaster Glass
Leroy Clausing Co.
Lynn, Robert M.
Merry Instr. Co.
Northrop Anaheim
Optron Laboratory
Palos Optical
Perkin-Elmer
Regal Instr. Co.
Simpson Optical
Zenith Optical Lab.

REFLECTORS, Special Alloy

Acme Industrial
Bausch & Lomb
Bronoptics Co.
Buhl Optical
E & W Optical
Gaertner Scientific
Georator Corp.
Gordon Enterprises
Haynes Stellite
Helio Instr. Co.
Internat. Devel. Co,
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Merry Instr. Co.
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Mason-Neilan Div.
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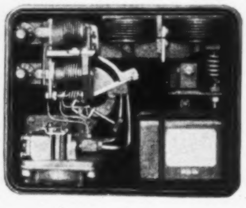

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COMPUTING RELAY

- Receives pneumatic signals from transmitters, controllers, and/or relays and produces a control signal according to the computing or control action desired.

As a computer it can multiply, divide, reverse, subtract, average, or totalize pneumatic signals.

As a controller it provides the following control actions: Proportional; Proportional plus Reset; Proportional plus Rate; Proportional plus Reset plus Rate; and Floating (Reset only).

Request Product Specification P99-3.

BAILEY METER COMPANY
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Bailey Meter Company Ltd., Montreal, Canada

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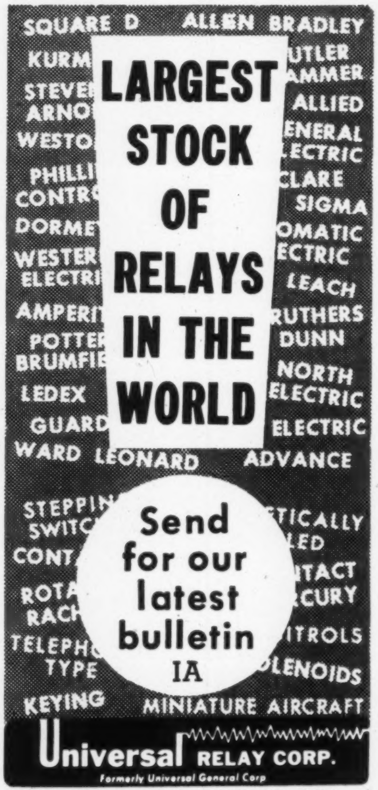

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REGISTERS, Magnetic Shift, see Magnetic Shift Registers

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REGULATORS, Air and/or Gas, see Pressure Regulators, Air

REGULATORS, Boiler, see Boiler Room Instruments

REGULATORS, Current, see Current Regulators

REGULATORS, Damper, see Boiler Room Instruments

REGULATORS, District, see Gas Distribution

REGULATORS, Flow, see Flow Regulators

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U. S. Relay Co.
Walser Autom. Timer
Ward Leonard
Warrick Co.
Westinghouse Electric
Weston Electcl. Instr.
Wheelock Signals
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Zenith Electric

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Aemco Inc.
Airpax Products
Allen-Bradley
Allied Control Co.
Amer. Instr. Co.
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Cook Electric
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Deltronic Corp.
Ebert Electronics
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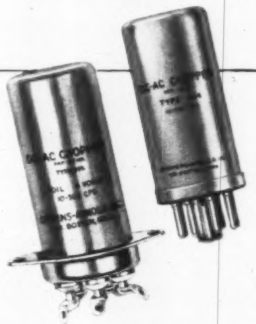
For 60 Cycle Use

There are twenty-two different types, both single and double pole, built to rigid commercial specifications with the emphasis on long life, low noise level, and extreme reliability. Please write for Catalog 370.

DC-AC CHOPPER
STEVENS-ARNOLD INC.
SOUTH BOSTON, MASS.



DC-AC CHOPPERS

For 0–500 Cycle Use

All the usual military specifications are met with liberal factors of safety. Before any Chopper is shipped, it is tested twice over the range of −65°C +85°C to give double proof of stamina. Each production lot sample life tested. Please write for Catalog 280.

ULTRA HIGH SPEED RELAYS

Operating time 200 microseconds. Mount in any position. Will cover the range of −65°C +85°C and are factory sealed. Please write for Catalog 337.

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TYPE 330
STEVENS-ARN
SOUTH BOSTON

RESONANT RELAYS

Permit remote control by radio or carrier current through frequency discrimination. Relays operate only when energized at rating and reject all other frequencies. Eleven types are offered in the range of 153–442 cycles. Please write for Catalog 335.

S/A-9 A

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INCORPORATED

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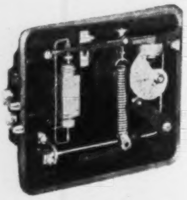

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POSITIONING RELAY

- Accurately positions a control valve or drive to the control requirements as received pneumatically from the control station. Also included is a cam adjustment for tuning valve or drive characteristics to system characteristics. This unit is ideally suited for control of flow characteristics of regulating devices.

Standard SAMA signal ranges of 3-15 psig or 3-27 psig.

Relay is direct or reverse acting and suitable for top or bottom connected valves. Six pre-shaped cams are supplied for square root, linear, square, and half-travel regulating characteristics.

Request Product Specification P99-5.

BAILEY METER COMPANY
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Bailey Meter Company Ltd., Montreal, Canada

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Simpson Electric
Square D Co.
Stromberg-Carlson
Struthers-Dunn
Triad Transf. Corp.
Triplett Electcl. Instr.
Union Switch & Signal
U. S. Instr. Corp.
U. S. Relay Co.
Ward Leonard
Westinghouse Electric
Weston Electcl. Instr.
Wheelock Signals, Inc.

RELAYS, Demand Totalizing

Allied Control Co.
Autocall Co.
Autom. Switch Co.
Cook Electric
Electronic Spec. Co.
Elgin Natl. Watch Co.
Engrg. & Res. Corp.
Essex Wire Corp.
GE, Apparatus Sales
Guardian Electric
Hagan Chem. & Controls
Jaidinger Mfg. Co.
Leach Relay Co.
Magnecraft Electric
Sangamo Electric
Simpson Electric Co.
Triad Transf. Corp.
Westinghouse Electric

RELAYS, Electronic

Aero Elx. (Chicago)
Allen-Bradley
Allied Control Co.
Amer. Electroneering
Amer. Instr. Co.
Amperite Co., Inc.
Authorized Mfrs. Service
Automatic Electric
Automatic Elect. Mfg.
Autom. Elect. Sales Corp.
Autom. Switch Co.
Autom. Timing & Controls
Autron Engrg., Inc.
B/W Controller
Basic Controls, Inc.
Avion Div.
Beck Co.
Bell & Howell
Bendix, Eclipse-Pioneer
Berkshire Labs.
Bristol Co.
Burroughs Corp.
Central Scientific
Chicago Apparatus Co.
Clark Controller Co.
Coleman Electric
Comar Electric
Computer Co. of Amer.
Continental Elect. Co.
Cook Electric
Corbett Science Labs.
Cramer Controls Corp.
Cutler-Hammer
Curtiss-Wright
Datascan, Inc.
Davenport Mfg.
Davis & Co., Inc., Dean
Deltron, Inc.
Deltronic Corp.
Detect-O-Ray Co.
De-Tec-Tronics Labs.
Devtronics, Inc.
Dormitzer Elect. & Mfg.
Ebert Electronics
Eby, Inc.
Edison, Inc., Thomas A.
Electro-Mechanical Labs.
Electro-Mechanical Specs.
Electro-Medical Lab.
Electronic Control Corp.
Electronic Devel. Lab.
Electronic Prods. Co.
Electronic Spec. Co.
Electronics Corp. of Amer.
Electro-Physics Co.
Elgin Natl. Watch
El Mec Labs.
El-Tronics, Inc.
Engrg. & Res. Corp.
Engrg. Res. & Devel.
Erdco Engrg. Co.
Ess Instr. Co.
Essex Wire Corp.
Excel Elect. Service Co.
Farmer Elect. Prods.
Farnsworth Electronics
Ferrara Inc.
Fisher-Pierce
Fisher Scientific
General Automatic
General Controls Co.
GE, Apparatus Sales
Gorrell & Gorrell
Gould Labs.
Greiner, Emil
Guardian Elect. Mfg.
H-B Instr. Co.
Haledy Electronic Co.
Hart Mfg. Co.
Harvey Radio Labs.
Haydon Co., A. W.
Hi-G, Inc.
Hufco Industries
Indust. Electronic Conts.
Industrial Electronics
Industro, Inc.
Instruments Inc.
Internat. Business Machs.
Internat. Instr. Co.
Jarco Services
Jarvis Electronics
Johanson Mfg. Co.
Johnson Co., E. F.
Kahn & Co.
Kellogg Switchboard
Kinetic Instrument
Kurman Electric
L.A.B. Corp.
Labline, Inc.
LaPine & Co.
Larson Instrument
Leach Relay Co.
Ling Electronics
Liquidometer Corp.
Lumenite Electronic
Lyman Electronic
Machinery Electrification
Mack Electric Devices
Magnecord Electric
Manning, Maxwell & Moore
Metron Instrument
Minneapolis-Honeywell
  Boston Div.
Mullenbach Elect. Mfg.
Neomatic, Inc.
Newark Electric Co.
North Electric
Opad Electric
Peschel Electronics
Phaostron Co.
Philadelphia Scientific
Phillips Control
Phipps & Bird
Pollak Corp., Joseph
Post Machinery Co.
Potter & Brumfield
Precision Scientific
Prec. Therm. & Insts.
Price Electric
Process & Instruments
RCA Div.
Ransom Research
Raytheon Mfg.
Relay Sales, Inc.
Relay Service Co.
Research Appliance Co.
Revere Corp. of Amer.
Rockwell Engrg. Co.
Sargent & Co.
Servo-Tek Products
Sigma Instruments
Signal Engrg. & Mfg.
Simpson Electric
Square D Co.
Standard Electrical Prods.
Stelma, Inc.
Struthers-Dunn
Sweets Co., Martin
Sylvania Elect. Prods.
Technical Equipt. Co.
Televiso Products
Thordarson-Meissner
Triad Transf. Corp.
Union Switch & Signal
U. S. Relay Co.
Vacuum Tube Prods.
Varo Mfg.Co.
Virginia Electronics
Wabash Metal Prod.
Walkirt Co.
Westinghouse Electric
Weston Electcl. Instr.
Wilkins-Anderson
Wilson & Co., G. C.
Worner Electronic Devices

RELAYS, Frequency

Autocall Co.
Automatic Switch Co.
Bendix, Eclipse-Pioneer
Biddle Co., James G.
Clark Controller
Control Corp.
Cook Electric
Deltronic Corp.
Electronic Spec. Co.
Elgin Natl. Watch
Engrg. & Res. Corp.
Esterline-Angus
G-V Controls
GE, Apparatus Sales
Guardian Electric
Gulton Industries
Hickok Electcl. Instr.
Helipot Div.
Internat. Business Machs
James Vibrapowr Co.
Kellogg Switchboard
Leach Relay Co.
Lumenite Electronic
Phaostron Co.
Potter & Brumfield
Sigma Instruments
Simpson Electric Co.
Stevens-Arnold, Inc.
Tri-Tronics Co.
Triad Transf. Corp.
U. S. Relay Co.
Varo Mfg. Co., Inc.
Wallace & Tiernan
Ward Leonard
Waugh Engrg. Co.
Westinghouse Electric

RELAYS, Galvanometer

Allied Control Co.
Assembly Products
Autocall Co.
Autom. Timing & Controls
Eby, Inc., Hugh H.
Edison, Inc., Thomas A.
Engrg. & Res. Corp.
Esterline-Angus
GE, Apparatus Sales
Larson Instr. Co.
Leach Relay Co.
Marion Electcl. Instr.
Minn.-Honeywell, Boston
Potter & Brumfield
Roller-Smith
Rubicon Co.
Simpson Electric Co.
Triad Transf. Corp.
Varo Mfg. Co.
Westinghouse Electric

RELAYS, Heavy Duty (rating 30 amp. or above)

Adams & Westlake
Allen-Bradley
Amer. Kloeckner-Moeller
Autom. Switch Co.
B/W Controller
Clark Controller
Cook Electric
Cutler-Hammer
Durakool, Inc.
Ebert Electronics
Electro-Tech Equip.
Elgin Natl. Watch Co.
Essex Wire Corp.
Furnas Electric
GE, Apparatus Sales
Gordos Corp.
Guardian Elect. Mfg. Co.
H-B Instr. Co.
Hetherington, Inc.
Jennings Radio Mfg. Corp.
Johnson Co., E. F.
Kurman Electric
Leach Relay Co.
Lumenite Electronic
Mack Electric Devices
Magnecraft Electric
Phaostron Co.
Pollak Corp., Joseph
Potter & Brumfield
Price Electric
Relay Sales, Inc.
Simpson Electric Co.
Stromberg-Carlson
Struthers-Dunn
U. S. Relay Co.
Ward Leonard
Westinghouse Electric
Wheelock Signals, Inc.
Zenith Electric

RELAYS, Hermetically Sealed

A'G'A Div.
Aemco, Inc.
AiResearch Mfg.
Automatic Electric Sales.
Baso Inc.
Belltron Mfg. Co.
Branson Corp.
Bristol Co.
Clare & Co., C. P.
Control Specialty
Cook Electric
Curtiss-Wright
Cutler-Hammer
Ebert Electronics
Electro-Mechanical Instr.
Electro-Mechanical Spec.
Electro Tec Corp.
Electro-Tech Equip.
Elgin Nat'l. Watch Co.
Essex Wire Corp.
Filtors, Inc.
GE Apparatus Sales
G-V Controls
General Automatic Corp.
Guardian Electric Mfg.
H-B Instrs.
Hart Mfg. Co.
Haydon Co., A. W.
Hi-G, Inc.
Iron Fireman Mfg.
Jarco Services, Inc.
Kurman Electric Co.
Leach Relay Div.
Magnecraft Electric
Magnetic Amplifiers
Marion Electrical Inst.
Naybor Labs.
North Electric
Ohmite Mfg. Co.
Phaostron Instr. & Elect.
Pollak Corp., Joseph
Price Electric
Radio Corp. of Amer.
Simpson Electric Co.
Stevens-Arnold, Inc.
Struthers-Dunn Co.
Tung-Sol Electric
Union Switch & Signal
U. S. Relay Co.
Weston Electrical Instr.
Wheelock Signals

RELAYS, Instrument Controlled

Abrams Instr. Co.
Adams & Westlake
Aemco Inc.
AiResearch Mfg. Co.
Allied Control Co.
Amer. Instr. Co.
Amer. Kloeckner-Moeller
Amperite Co., Inc.
Assembly Products
Autocall Co.
Automatic Elect. Mfg.
Autom. Elect. Sales Corp.
Autom. Switch Co.
Autom. Timing & Controls
Bailey Meter Co.
Barber-Colman
Basic Controls, Inc.
Baso, Inc.
Beck Co.
Bendix, Eclipse-Pioneer
Bendix-Friez
Bristol Co.
Branson Corp.
Clark Controller
Climax Div.
Comar Electric
Conoflow Corp.
Cook Electric
Cramer Controls Corp.
Datascan, Inc.
Deltronic Corp.
Devtronics Inc.
Ebert Electronics
Edison Inc., Thomas A.
Electric Des. & Mfg.
Electro-Mech. Instr.
Electronic Specialty Co.
Electro-Tech Equip.
Elgin Natl. Watch
Essex Wire Corp.
General Controls Co.
GE, Apparatus Sales
Guardian Elect. Mfg. Co.
H-B Instr. Co.
Haledy Electronic Co.
Haydon Co., A. W.
Henschel Corp.
Instruments Inc.
Jaidinger Mfg. Co.
Larson Instr. Co.
Leach Relay Co.
Luther Mfg. Co.
Mack Electric Devices
Magnecord Electric
Magnecraft Electric
Manning, Maxwell & Moore
Marion Electcl. Instr.
Minneapolis-Honeywell
Moore Products
Perfex Corp.
Phaostron Co.
Philadelphia Scientific
Philadelphia Thermom. Co.
Phillips Controls
Pollak Corp., Joseph
Potter & Brumfield
Precision Scientific
Prec. Therm. & Insts.
Ransom Research
Relay Service Co.
Roller-Smith
Scam Instr. Corp.
Sealectric Switch & Relay
Sigma Instruments
Signal Engrg. & Mfg.
Simpson Electric
Struthers-Dunn
Taylor Instr. Cos.
Technical Equipt. Corp.
Tork Clock
Triad Transf. Corp.
Triplett Electcl. Instr.
Union Switch Signal
U. S. Relay Co.
Ward Leonard
Westinghouse Electric
Weston Electcl. Instr.

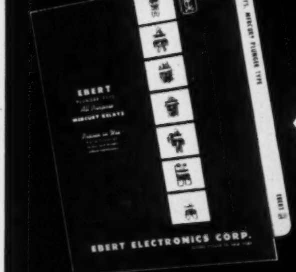
RELAYS, Latching, see Relays, Stepping

RELAYS, Light Sensitive, see Relays, Photoelectric

RELAYS, Magnetic, see Relays, Electromagnetic

RELAYS, Mercury (see also Switches, Mercury)

Adams & Westlake
Allied Control Co.
Amer. Instr. Co.
Autocall Co.
Autom. Elect. Sales Corp
Autom. Timing & Controls
Chatham Electronics
Clare & Co., C. P.
Continental Elect. Co.
Deltron, Inc.
Durakool, Inc.
Ebert Electronics
Electro Devices (St. Louis)
Electronic Apparatus
Gordos Corp.
H-B Instr. Co.
Haledy Electronics
Mack Electric Devices
Mercoid Corp.
Mercury Contacts, Inc.
Minneapolis-Honeywell
Philadelphia Scientific
Precision Scientific
Prec. Thermom. & Insts.
Relay Sales, Inc.
Scientific Glass App.
Struthers-Dunn
Wabash Metal Prod.



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RELAYS, Mercury Tube
Adams & Westlake
Allied Control Co.
Amer. Instr. Co.
Autocall Co.
Autom. Elect. Sales Corp.
Autom. Timing & Controls
Chatham Electronics
Clare & Co., C. P.
Durakool, Inc.
Ebert Electronics
Electric Switch Corp.
Electro-Tech Equip.
G-M Labs.
General Controls Co.
Gordos Corp.
Greiner, Emil
H-B Instr. Co.
Haledy Electronics
Kellogg Switchboard
Mack Electric Devices
Mercoid Corp.
Mercury Contacts, Inc.
Minneapolis-Honeywell
Philadelphia Scientific
Philadelphia Thermom. Co.
Precision Scientific
Prec. Thermom. & Insts.
Relay Sales, Inc.
Struthers-Dunn
Wabash Metal Prod.
Ward Leonard

RELAYS, Motor Driven, Time Delay
Abrams Instr. Corp.
Aemco, Inc.
Allen-Bradley
Amer. Instr. Co.
Amperite Co., Inc.
Automatic Elect. Mfg.
Autom. Switch Co.
Autom. Timing & Controls
Barber-Colman
Beattie-Coleman
Bendix-Friez
Betts & Betts
Bristol Motor Div.
Clarostat Mfg. Co.
Control Engrg. Co.
Controls, Inc.
Cook Electric
Cramer Controls Corp.
Cutler-Hammer
Dimco-Gray
Eagle Signal Corp.
Electronic Spec. Co.
Electro-Tech Equip.
Elgin Natl. Watch
General Controls Co.
GE Apparatus Sales
GE Gen. Purp. Contr.
Globe Industries
Guardian Elect. Mfg. Co.
Hagen Mfg. Co.
Haydon Co., A. W.
Haydon Mfg. Co.
Henschel Corp.
Industrial Engrg. Corp.
Industrial Timer Corp.
Kopp Scientific
Kurman Electric
Leach Relay Co.
Lumenite Electronics
Minneapolis-Honeywell
Paragon Electric
Philadelphia Scientific
Potter & Brumfield
Price Electric
Relay Sales, Inc.
Sealectric Switch & Relay
Square D Co.
Struthers-Dunn
Vocaline Co. of Amer.
Wallace & Tiernan
Ward Leonard
Westinghouse Electric
Weston Electcl. Instr.
Zenith Electric

RELAYS, Movable Coil, A C
Allen-Bradley
Amer. Kloeckner-Moeller
Assembly Products
Automatic Elect. Mfg.
Autom. Switch Co.
Clark Controller
Cook Electric
Cutler-Hammer
Electro-Tech. Equipt.
Elgin Nat'l. Watch Co.
Esterline-Angus
Kurman Electric
GE, Apparatus Sales
Guardian Elect. Mfg. Co.
Larson Instr. Co.
Potter & Brumfield
Relay Sales, Inc.
Roller-Smith Co.
Simpson Electric
Struthers-Dunn
Tipp-Tronic, Inc.
Triplett Electcl. Instr.
Union Switch
Westinghouse Electric
Weston Electcl. Instr.

RELAYS, Overload
Adams & Westlake
Allen-Bradley
Allied Control Co.
Amer. Kloeckner-Moeller
Amperite Co., Inc.
Assembly Products
Autocall Co.
Automatic Elect. Mfg.
Autom. Switch Co.
Autom. Timing & Controls
B/W Controller
Baso, Inc.
Bunnell & Co.
Burlington Instr. Corp.
Clark Controller Co.
Comar Electric
Cook Electric
Cutler-Hammer
E-T-A Products
Edison, Inc., Thomas A.
Edison, Instr. Div.
Electro-Mechanical Specs.
Electronic Control Corp.
Electronic Specialty Co.
Elgin Natl. Watch
Essex Wire Corp.
Filtors, Inc.
Furnas Electric
G-V Controls, Inc.
GE, Apparatus Sales
GE Gen. Pump. Contr.
Guardian Elect. Mfg. Co.
Jaidinger Mfg. Co.
Jennings Radio Mfg. Corp.
Kurman Electric
Larson Instr. Co.
Leach Relay Co.
Magnecord Electric
Magnecraft Electric
Monitor Controller Co.
Neomatic, Inc.
North Electric
Ohmite Mfg. Co.
Perfex Corp.
Phaostron Co.
Pollak Corp.
Potter & Brumfield
Price Electric
Relay Sales, Inc.
Roller-Smith
Sealectric Switch Relay
Sigma Instruments
Simpson Electric
Square D Co.
Standard Electcl. Prods.
Struther-Dunn
Sweets Co., Martin
Tung-Sol Electric
U. S. Relay Co.
Ward Leonard
Westinghouse Electric
Weston Electcl. Instr.

RELAYS, Permanent-Magnet Movable Coil (D'Arsonval Type)
Amer. Kloeckner-Moeller
Assembly Products
Automatic Switch
Bunnell & Co., J. H.
Cook Electric
Electric Des. & Mfg.
Essex Wire Corp.
Esterline-Angus
GE, Apparatus Sales
Kurman Electric
Larson Instr. Co.
Leach Relay Co.
Marion Electcl. Instr.
Relay Sales, Inc.
Roller-Smith
Rudolph & Sons, O. C.
Simpson Electric
Signal Engrg. & Mfg.
Tipp-Tronic. Inc.
Triplett Electcl. Instr. Co.
Westinghouse Electric
Weston Electcl. Instr.

RELAYS, Photoelectric
Allied Control Co.
Amer. Instr. Co.
Automatic Electric
Autom. Elect. Sales Corp.
Autom. Timing & Controls
Autotron Co.
Autron Engrg., Inc.
Avion Div.
Basic Controls, Inc.
Comar Electric
Continental Electric
Cutler-Hammer
Datascan, Inc.
Davenport Mfg.
Deltron, Inc.
Detect-O-Ray
De-Tec-Tronic Corp.
Dickson Co.
Eby, Inc.
Edison, Thomas A.
Electro-Mechanical Insts.
Electro-Physics Co.
Electronic Control Corp.
Electronic Dev. Lab.
Electronic Prods. Co.
Electronics Corp. of Amer.
Electro-Tech Equip.
Elgin Natl. Watch
El-Tronics, Inc.
Engrg. Res. & Devel.
Ess Instr. Co.
Farmer Electr. Prods. Co.
Fisher-Pierce
G-M Labs., Inc.
General Controls Co.
GE, Apparatus Sales
Gorrell & Gorrell
Guardian Elect. Mfg. Co.
Haledy Electronics
Hetherington, Inc.
Hunter Mfg. Co.
Hupp Electronics
Indust. Electronic Conts.
Jordan Co.
Kurman Electric
Larson Instr. Co.
Leach Relay Co.
Lewyt Corp.
Lumenite Electronics
Machinery Electrification
Minneapolis-Honeywell
Neomatic, Inc.
Phaostron Co.
Phillips Control
Phipps & Bird
Phoenix Prec. Instr.
Potter & Brumfield
Potter Instr. Co.
Prec. Thermom.
Relay Service Co.
Ripley Co.
Rockwell Engrg. Co.
Rubicon Co.
Sigma Instruments
Simpson Electric Co.
Struthers-Dunn
Triplett Electcl. Instr.
Tri-Tronics Co.
Ward Leonard
Westinghouse Electric
Weston Electcl. Instr.
Worner Electronic Devices

RELAYS, Pneumatic
A'G'A Div.
AiResearch Mfg. Co.
Allen-Bradley
Bailey Meter Co.
Bellofram Corp.
Black, Sivalls & Bryson
Bristol Co.
Clark Controller
Conoflow Corp.
Cutler-Hammer
Dahl Co., Inc., George W.
Eagle Signal Corp.
Fisher Governor
Foxboro Co.
GE Gen. Purp. Contr.
Hagan Chem. & Controls
Johnson Service Co.
Kendall Controls Corp.
Mead Specialties Co.
Minneapolis-Honeywell
Moore Products
Phaostron Co.
Powers Reg. Co.
Research Controls
Taylor Instr. Cos.
Westinghouse Air Brake
Westinghouse Electric

RELAYS, Polarized
Airpax Prod.
Allied Control Co.
Assembly Products
Autocall Co.
Automatic Electric
Automatic Elect. Mfg.
Autom. Elect. Sales Corp.
Autom. Switch Co.
Babcock Relays
Barber-Colman
Bendix, Eclipse-Pioneer
Branson Corp.
Bristol Co.
Bunnell & Co.
Clare & Co., C. P.
Clark Controller Co.
Cook Electric
Edison Inc., Thomas A.
Electro-Mechanical Inst.
Elgin Natl. Watch
Filtors, Inc.
GE, Apparatus Sales
Hart Mfg. Co.
Hetherington, Inc.
Jaidinger Mfg. Co.
Kurman Electric
L.A.B. Corp.
Larson Instr. Co.
Leach Relay Co.
Luther Mfg. Co.
Magnecord Electric
Marion Electcl. Instr.
Matisa Equipt. Corp.
Maxson Corp.
Neomatic, Inc.
North Electric
Phaostron Co.
Pollak Corp., Joseph
Potter & Brumfield
Prec. Thermom. & Insts.
Raytheon Mfg.
Relay Sales, Inc.
Sealectric Switch & Relay
Sigma Instruments
Signal Engrg. & Mfg.
Stevens-Arnold, Inc.
Stromberg-Carlson
Struthers-Dunn
Triplett Electcl. Instr.
Union Switch & Signal
U. S. Instr. Corp.
Westinghouse Electric
Weston Electcl. Instr.
Wheelock Signals

RELAYS, Power
Adams & Westlake
Aemco Inc.
Allen-Bradley
Allied Control Co.
Amer. Instr. Co.
Amer. Kloeckner-Moeller
Automatic Electric
Automatic Elect. Mfg.
Autom. Switch Co.
Bendix, Eclipse-Pioneer
Branson Corp.
Clare & Co., C. P.
Clark Controller Co.
Comar Electric
Cook Electric
Cutler-Hammer
Detect-O-Ray
Ebert Electronics
Electro-Mechanical Specs.
Electronic Spec. Co.
Elgin Natl. Watch
Essex Wire Corp.
Esterline-Angus
Filtors, Inc.
General Controls Co.
GE, Apparatus Sales
GE Gen. Purp. Contr.
Grayhill
Guardian Elect. Mfg. Co.
H-B Instr. Co.
Hagan Chem. & Control
Hart Mfg. Co.
Henschel Corp.
Hetherington, Inc.
Hi-G, Inc.
Hufco Industries
Jennings Radio
Johnson Co., E. F.
Kurman Electric
Leach Relay Co.
Mack Electric Devices
Magnecraft Electric
North Electric
Ohmite Mfg. Co.
Perfex Corp.
Phaostron Co.
Philadelphia Scientific
Phillips Control
Pollak Corp., Joseph
Potter & Brumfield
Price Electric
Relay Sales, Inc.
Roller-Smith
Sealectric Switch & Relay
Sigma Instruments
Signal Engrg. & Mfg.
Square D Co.
Struthers-Dunn
Swartwout Co.
U. S. Instr. Corp.
U. S. Relay Co.
Ward Leonard
Warrick Co., Charles F.
Westinghouse Electric
Weston Electcl. Instr.

Wheelock Signals

RELAYS, Sensitive
Adams & Westlake
Aemco Inc.
Amer. Instr. Co.
Assembly Products
Automatic Electric
Autom. Elect. Sales Corp.
Autom. Switch Co.
Babcock Relays
Baso, Inc.
Biddle Co., James G.
Bristol Co.
Clare & Co., C. P.
Comar Electric
Cook Electric
Ebert Electronics
Edison, Inc., Thomas A.
Electro-Mech. Instr.
Electro-Mechanical Spec.
Electronic Specialty Co.
Electronics Corp. of Amer.
Electrosonic Engrg. Co.
Electro-Tech Equip.
Elgin Natl. Watch
Essex Wire Corp.
Fed Telephone & Radio
General Automatic
General Controls Co.
GE, Apparatus Sales
Guaradian Elect. Mfg. Co.
H-B Instr. Co.
Hart Mfg. Co.
Haydon Co., A. W.
Hetherington Inc.
Iron Fireman Electronics
James Vibrapowr Co.
Kurman Electric
Larson Instr. Co.
Leach Relay Co.
Liquidometer Corp.
Lumenite Electronic
Luther Mfg. Co.
Mack Electric Device
Magnecraft Electric
Marion Electrical Inst.
Mullenbach Div.
Mutual Industries
Neomatic, Inc.
North Electric
Ohmite Mfg. Co.
Phaostron Co.
Phillips Control Corp.
Potter & Brumfield
Price Electric
Process & Instruments
Ransom Research
Relay Sales, Inc.
Relay Service Co.
Research Appliance Co.
Revere Corp. of Amer.
Sealectric Switch & Relay
Sigma Instruments
Simpson Electric
Std. Electrical Prods.
Struthers-Dunn
Tung-Sol Electric
Union Switch & Signal
U. S. Instr. Corp.
U. S. Relay Co.
Ward Leonard
Westinghouse Electric
Weston Electcl. Instr.
Wheelock Signals
Winslow Co., Inc.

RELAYS, Stepping
Allied Control Co.
Autocall Co.
Automatic Electric
Automatic Elect. Mfg.
Autom. Elect. Sales Co.
Clare & Co., C. P.
Clark Controller
Collins Radio Co.
Control Engrg. Co.
Cook Electric
Corbett Science Labs.
Daystrom Inst.
Electronic Spec. Co.
Electro-Tech Equip.
Elgin Nat'l. Watch Co.
Federal Telephone & Radio
GE, Apparatus Sales
Guardian Elec. Mfg. Co.
Haydon Co., A. W.
Hetherington, Inc.
Imtra Corp.
Intelex Systems
Kellogg Switchboard
Leach Relay Co.
Leland, Inc., G. H.
Lumenite Electronics
Neomatic, Inc.
North Electric
Oak Mfg. Co.
Phaostron Co.
Phillips Control Corp.
Potter & Brumfield
Price Electric
Relay Sales, Inc.
Roller-Smith
Sealectric Switch & Relay
Square D Co.
Std. Electrical Prods.
Struthers-Dunn
Union Switch & Signal
U. S. Instr. Corp.
Westinghouse Electric

RELAYS, Subminiature
Aemco Inc.
AiResearch Mfg. Co
Amperite Co., Inc.
Auto. Electric Sales
Babcock Relays
Baso, Inc.
Belltron Mfg.
Branson Corp.
Bristol Co.
Clare & Co., C. P.
Cook Electric

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COAXIAL
COMMUNICATIONS
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MINIATURE
MINIATURE HERMETICALLY SEALED
PULSE
POWER
TIME DELAY

SOLENOIDS
MINIATURE, AC-DC
PLUNGERS FOR PUSH OR PULL
300 CUSTOM TYPES FROM 20 STANDARD PARTS
DOUBLE ACTING

SWITCHES
IMPULSE
MOMENTARY
PUSH PULL
ROTARY SELECTOR
TOGGLE

OUR ENGINEERS CAN HELP SOLVE YOUR PROBLEMS
Take advantage of POLLAK engineering design service. Our factory-trained engineers are available to help you solve difficult relay, switching and electrical control problems.

WE INVITE YOUR INQUIRY

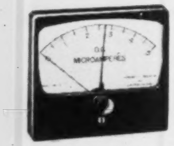
JOSEPH POLLAK CORPORATION
DEPT. C
75-95 Freeport Street
Boston 22, Mass.

For more information circle **291** on inquiry card.

METER-RELAYS

Indicating meters with built-in locking contacts for control or alarm. Trip point adjustable.

Model 255-C
High limit,
Ruggedized-Sealed
0-100 Ua DC
$46.00



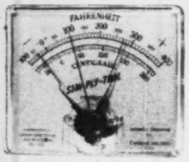
Model 461-C Bakelite
High Limit
0-5 Ua DC
$107.50

Styles:

RUGGEDIZED-SEALED metal cases are 2½, 3½, and 4½" round, shock-mounted movement, gasket-sealed. BLACK BAKELITE . . . glass front, 4½" rectangular case. Other colors on special order. CLEAR PLASTIC 2½, 3¾, & 4½" rectangular.

Ranges:

0-5 Microamps to 0-50 Amps. 0-5 Millivolts to 0-500 volts, AC or DC. (Minimum AC voltage range 0-250 Mv.) Thermocouple temperature ranges cover from -400 to +3000°F.



Model 451-C
Double Contact -100 to +400°F.—**$64.00**

MIL Specs:

Ruggedized - sealed meter-relays will meet these specs: Shock: 1 and 3-foot drops, 400 lb. hammer, 3 planes. Vibration: MIL-M-10304A.
Salt Spray: QQ-M-151A.
Temp.: -30°/+70°C.
Sealing: MIL-M-6A.

Accuracy:

Point of contact: ¼% to 1%.

Indicating: ±2% of full scale at any point of dial. Can be 1%.

Contacts:

Rating: Standard is 5-25 milliamperes at 75-125 volts DC. Optional ratings to 250 Ma, 6 to 250 volts. DC.

Arrangement: High Limit (makes on increase of signal), Low Limit (makes on decrease of signal), Double (both high and low contacts)

Life: 10 to 20 million operations.

LIAD MULTI-CONTACT METER-RELAY

The LIAD consists of a D'Arsonval meter movement with one or several contacts carried on the moving pointer, a printed circuit scale (95 angular degrees), and a device for gripping the pointer and its contacts to the scale contact bars. The unique combination of contact closures resulting from this gripping tells the level of the signal—and can be transmitted or used for telemetering; automatic production testing or grading; maximum value reading; simple quantitative read-out, etc.

Standard LIAD with 10 segment scale band, one milliampere sensitivity, 12 volt read-out coil. Price **$100.00**

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Price Electric
Relay Sales, Inc.
Relay Service Co.
Revere Corp. of Amer.
Std. Electrical Prods.
Struthers-Dunn
U. S. Relay Co.
Winslow Co., Inc.

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Amer. Relay
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Comar Electric
Cook Electric
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Henschel Corp.
Hufco Industries
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Kurman Electric
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Magnecraft Electric
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Ohmite Mfg. Co.
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Phillips Control
Potter & Brumfield
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Std. Electrical Prods.
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Struthers-Dunn
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Weston Elect. Inst. Corp.
Wheelock Signals

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Bendix-Friez
Bristol Co.
Cook Electric
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Fielden Instr. Div.
G-M Laboratories
G-V Controls
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GE, Apparatus Sales
Gleason-Avery
H-B Instr. Co.
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Lewis Engrg. Co.
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Minneapolis-Honeywell
Perfex Div.
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Square D Co.
Soreng Products
Struthers-Dunn, Inc.
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Ulanet Co.
U. S. Relay Co.
Westinghouse Electric
Weston Electcl. Instr. Corp.

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Bristol Co.
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Fielden Instr. Div
Fuel Watchman
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Phaostron Co.
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Struthers-Dunn
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Wallace & Tiernan
Westinghouse Electric

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Allegany Instr. Co.
Allen-Bradley
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Amer. Instr. Co.
Amperite Co.
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Autom. Elect. Sales Corp.
Autom. Switch Co.
Autom. Timing & Controls
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Basic Controls, Inc.
Baso, Inc.
Belltron Mfg.
Betts & Betts
Borel & Co.
Branson Corp.
Bristol Co.
Clare & Co.
Clark Controller Co.
Clarostat Mfg. Co.
Comar Electric
Control Engrg. Co.
Cook Electric
Cramer Controls Corp.
Curtiss-Wright
Cutler-Hammer
Dormitzer Elect. & Mfg.
Durakool, Inc.
E-T-A Products
Eagle Signal
Ebert Electronics
Edison Inc., Thomas A.
Elastic Stop Nut
Electro-Mech. Specialties
Electronic Prods. Co.
Electronic Spec. Co.
Electronics Corp. of Amer.
Elgin Natl. Watch
Ferrara, Inc.
Fisher-Pierce
G-V Controls, Inc.
General Controls Co.
GE, Apparatus Sales
GE Gen. Purp. Contr.
Globe Industries
Gordos Corp.
Guardian Elect. Mfg. Co.
Hagan Chem. & Controls
Haledy Electronics Co.
Haydon Co., A.W.
Haydon Mfg. Co.
Heinmann Elect. Co.
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Industrial Timer Corp.
Internat. Business Machs.
Jaidinger Mfg. Co.
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Kurman Electric
Larson Instrument
Leach Relay Co.
Lumenite Electronics
Magnecraft Electric
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Metals & Controls Corp.
Minneapolis-Honeywell
Mutual Industries
National Time & Signal
Naybor Laboratories
Nelson Electric Mfg.
Neomatic, Inc.
North Electric
Ohmite Mfg. Co.
Paragon Electric
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Sigma Instruments
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Struthers-Dunn
Thordarson Elect. Mfg.
Union Switch & Signal
U. S. Relay Co.
Ward Leonard
Warrick Co.
Westinghouse Electric
Weston Elect. Inst.
White-Rodgers

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Bristol Co.
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Cooper-Hewitt Elect.
Ebert Electronics
Edison, Inc., Thomas A.
Eitel-McCullough
Electro-Mechanical Instr.
Elgin Natl. Watch
Essex Wire Corp.
GE
H-B Instr. Co.
Hastings-Raydist
Jennings Radio Mfg. Corp.
Lumenite Electronics
Mack Electric Devices
Pollak Corp., Joseph
Rockwell Engrg. Co.
Struthers-Dunn

RELAYS, Vacuum Tube, see Relays, Electronic

RELAYS, Vibrating Reed Type
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Bristol Co.
Cutler-Hammer
Electra Mfg. Co.
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Hetherington, Inc.
James Vibrapowr Co.
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RELIEF VALVES, see Valves, Relief

REMOTE-CONTROL EQUIPMENT, see Telemetering

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Kahn & Co.
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Simpson Electric
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Leeds & Northrup
Keithley Insts., Inc.
Miller, M. C.
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Rawson Electcl. Instr.
Roller-Smith
Rubicon Co.
Sensitive Res. Instr.
Shallcross Mfg. Co.
Sticht Co., Herman H.

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& FILAMENT
TRANSFORMERS
In Stock For IMMEDIATE DELIVERY

POWER TRANSFORMERS-STANDARD
All primaries 105/115/125 v., 60 c.p.s.

Cat. No.	Hi Volt Sec.	ct	DC Volts	DC Amps	Filament #1 Volt	Filament #1 Amp.	Filament #2 Volt	Filament #2 Amp.	MIL Case Size
MGP1	400/200	√	185	.070	6.3/5	2	6.3	3	HA
MGP2	650	√	260	.070	6.3/5	2	6.3	4	JB
MGP3	650	√	245	.150	6.3	5	5.0	3	KB
MGP4	800	√	318	.175	5.0	3	6.3	8	LB
MGP5	900	√	345	.250	5.0	3	6.3	8	MB
MGP6	700	√	255	.250					KB
MGP7	1100	√	419	.250					LB
MGP8	1600	√	640	.250					NB

FILAMENT TRANSFORMERS-STANDARD
All primaries 105/115/125 v., 60 c.p.s.

Cat. No.	Secondary Volt	Secondary Amp	Test VRMS	MIL Case
MGF1	2.5	3.0	2,500	EB
MGF2	2.5	10 0	2,500	GB
MGF3	5.0	3.0	2,500	FB
MGF4	5.0	10.0	2,500	HB
MGF5	6.3	2.0	2,500	FB
MGF6	6.3	5.0	2,500	GB
MGF7	6.3	10.0	2,500	JB
MGF8	6.3	20.0	2,500	KB
MGF9	2.5	10.0	10,000	JB
MGF10	5.0	10.0	10,000	KB

Send for NEW 48 page transformer catalog. Also ask for complete laboratory test instrument catalog.

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Shallcross Mfg. Co.
Slaughter Co.
Southw. Ind. Electronics
Sticht Co., Herman H.
Sun Electric Corp.

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Amer. Tradair Corp.
Associated Research
Bendix-Cincinnati
Biddle Co., James G.
Boone Instr.
Brush Electronics
California Magnetic
Cambridge Instr. Co.
Chicago Indust. Instr.
Clippard Instr. Lab.
Clough-Brengle
Curtiss-Wright
Davenport Mfg.
Dice Co., J. W.
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Electro-Measurements
Electro-Mec Lab.
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Precision Apparatus
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Scientific Specialties
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Simpson Electric
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RESISTANCE INDICATORS, Ohm

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Beede Electcl. Instr.
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Burlington Instr. Co.
Cambridge Instr. Co.
Chicago Indust. Instr.
Clippard Instr. Lab.
Clough-Brengle
Columbus Products
Dale Instruments
Davenport Mfg. Co.
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Dice Co., J. W.
Douglas Radio Labs.
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Electro Measmts. Inc.
Electronic Dev. Lab.
Electronic Instrument
Electronic Mfg.
Electronic Measmts. Co.
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Freed Transformer
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GE, Apparatus Sales
General Electronic
General Radio Co.
Gray Instr. Co.
Greibach Instruments
Hewson Co., John
Hickok Electcl. Instr.
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General Radio Co.
Gray Instr. Co.
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Julie Res. Labs.
Leeds & Northrup
Muirhead Instrument
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Pimex, Inc.
Research Instr. Co.
Rubicon Co.
Sensitive Res. Instr.
Shallcross Mfg.
Tech Labs., Inc.
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RESISTANCE STANDARDS, see Standards, Resistance

RESISTANCE THERMOMETERS, see Thermometers, Electrical Resistance

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Driver-Harris
Hitemp Wires
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Jelliff Mfg. Corp., C. O.
Kanthal Corp.
Newark Electric Co.
Ney Co., J. M.
Precision Resistor Co.
Rodale Mfg. Co.
Secon Metals Corp.

RESISTOR BOBBINS, Precision, Ceramic

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Centralab Div.
Clarostat Mfg. Co.
Du-Co Ceramics
General Ceramics
Precision Resistor Co.
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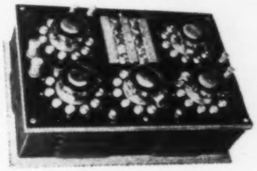
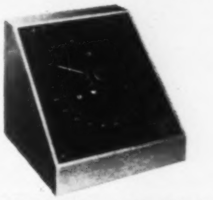
Steatite Div.
Shallcross Mfg.
Stupakoff Div.
Superior Steatite
Telex, E-A Div.
Thermo Materials, Inc.
Thor Ceramics, Inc.
Waterbury Co's.

GRAY FOR ACCURACY .1 TO .01%



E-1005 WHEATSTONE BRIDGE

WHEATSTONE, & KELVIN BRIDGES
LABORATORY & PORTABLE
MUELLER BRIDGE



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2½°, 5°, 10° & 15° INTERVALS
EQUAL AND LINEAR TO .005%

GRAY INSTRUMENT COMPANY
PHILADELPHIA 44, PA.

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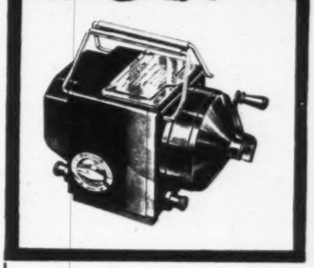

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The performance and endurance records of Megger Instruments are difficult, if not impossible, to match in any type of portable testing device. Sizes range from Midget Megger tool-kit instruments with ratings up to 50 megohms, 500 volts d.c. to Heavy Duty Megger Insulation Testers with special ranges to 200,000 megohms, 10,000 volts d.c. The Meg Type of Megger Insulation Testers (illustrated) in ranges up to 2,000 megohms, 1000 volts d.c. are available in hand-crank, rectifier-operated or dual-operated models. Now available with a megohm scale ÷ 1 and ÷ 10; an ohm scale; and a capacitance discharge in *one* instrument.

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Ducter® Earth Resistance Testers . . . Bulletin 25-I
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Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

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AMAZING
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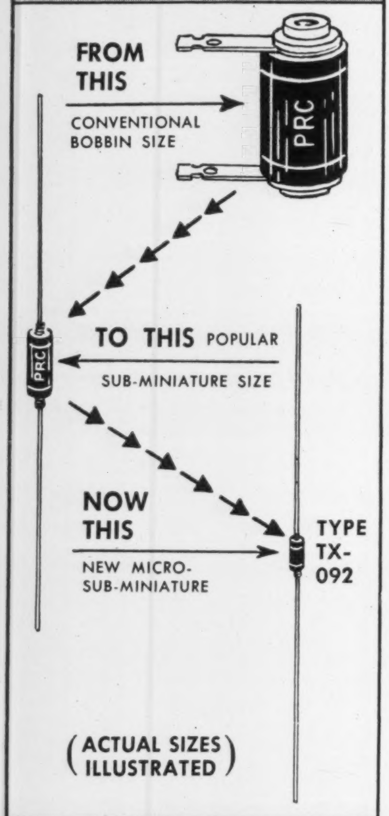
WIRE-WOUND
RESISTORS



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108 U. S. HIGHWAY 22
HILLSIDE, N. J.
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PHONE: Bigelow 3-3809

For more information circle **296** on inquiry card.

RESISTOR CORES, Ceramic

Centralab Div.
Du-Co Ceramics
Electronic Mechanics
General Ceramics
International Prods. Co.
International Resistance
Lapp Insulator Co.
Mallory & Co., P. R.
O'Hara Waltham Mfg.
Saxonburg Ceramics
Shallcross Mfg.
Steatite Div.
Stupakoff Div.
Superior Steatite
Thermo Materials, Inc.
Thor Ceramics, Inc.

RESISTOR STANDARDS, see Standards, Resistance

RESISTORS, Adjustable

Ace Electronics
Aerovox Corp.
Allen-Bradley
Anatran Engrg. Corp.
Black, Sivalls & Bryson
Bourns Labs.
Carter Parts Co.
Centralab Div.
Chatham Electronics
Chicago Telephone Sup.
Clarostat Mfg. Co.
Continental Carbon
Corbetc tSience Labs.
Cutler-Hammer
Dale Products Inc.
Daven Co.
Daystrom-Pacific
DeJur-Amsco
Dmeter Mfg.
Edcliff Instruments
Electro-Measurements
Electro-Mec Laboratory
Erie Resistor
Fairchild Camera
Foxboro Co.
GE, Apparatus Sales
General Radio
Goodyear Aircraft
Hardwick, Hindle, Inc.
Humphrey, Inc.
Instrument Resistors Co.
International Resistance
I. T. E. Circuit Breaker
Lectrohm, Inc.
Leeds & Northrup
Lewis Engrg. Co.
Mallory & Co., P. R.
Model Engrg. & Mfg.
Newark Electric Co.
Ohio Carbon Co.
Ohmite Mfg.
Precision Line, Inc.
Precision Resistance Co.
Reon Resistor
Research Instr. Co.
Resistors, Inc.
Rex Rheostat
Rochester Electronics
Rubicon Co.
Spectrol Electronics Div.
Sprague Electric
Stackpole Carbon
Sticht Co., Herman H.
Technology Instrument
Topp Industries
Tru-Ohm Prods. Div.
Vectron Inc.
Walker-Jamieson
Ward Leonard
Welch Mfg. Co., W. M.
Welwyn International
Westinghouse Electric
Wirt Co.

RESISTORS, Ballast

Amperite Co., Inc.
Clarostat Mfg. Co.
Dmeter Mfg.
GE
Hardwick, Hindle, Inc.
Herzog Miniature Lamp
Instrument Resistors, Inc.
Model Engrg. & Mfg.
Ohio Carbon
Ohmite Mfg. Co.
Precision Parts Co.
Rex Rheostat
Switchcraft, Inc.
Tru-Ohm Prods. Div.
Ward Leonard

RESISTORS, Carbon Composition and/or Variable

Ace Electronics
Aerovox Corp.
Allen-Bradley
Beck Bros.
Bendix, Eclipse-Pioneer
Bendix-Pacific
Biddle Co., Jas. G.
Black, Sivalls & Bryson
Bourns Labs.
Bristol Co.
Brown Electro-Measmt.
Carbon Div.
Central Scientific
Centralab Div.
Chicago Telephone Sup.
Cinema Engrg. Co.
Clarostat Mfg. Co.
Computer Instruments
Corbett Science Labs.
Cutler-Hammer
Dale Products
Daven Co.
DeJur-Amsco
Eastern Specialty Co.
Edcliff Instruments
Electro-Mec Labs.
Electro Mechanical Div.
Erie Resistor Corp.
Fairchild Camera
Federal Instr. Co.
Ford Engrg. Co.
Ford Instr. Co.
Galetronics Corp.
GE, Apparatus Sales
General Radio
General Scientific Div.
Genisco, Inc.
Giannini & Co.
Glenco Corp.
Goodyear Aircraft
Gray Instr. Co.
Hansen Electronics
Hardwick, Hindle, Inc.
Helipot Corp.
Instrument Resistors Co.
Insuline Corp.
International Resistance
Jarvis Electronics
Keystone Carbon
Lectrohm Inc.
Lectronic Research Labs.
Leeds & Northrup
Lewis Engrg. Co.
Librascope, Inc.
Mallory & Co., P. R.
Markite Co.
Morganite, Inc.
Natl. Carbon Co., Inc.
Natl. Elect. Controller
Newark Electric Co.
Ohio Carbon Co.
Ohmite Mfg. Co.
Phaostron Co.
Physics Research
Precision Resistance
Reon Resistor Corp.
Resistors, Inc.
Rex Rheostat
Rubicon Co.
Servotrol Co.
Shallcross Mfg.
Speer Carbon Co.
Stackpole Carbon
Sticht Co., Herman H.
Technology Instr. Div.
Texas Instruments
Thelen Co.
Topp Industries
United Optical
U. S. Instr. Corp.
Vectron Inc.
Victory Engrg. Corp.
Ward Leonard
Welch Mfg. Co., W. M.

RESISTORS, Decade

Aerovox Corp.
Bond Elect. Corp.
Cinema Engrg. Co.
Clarostat Mfg.
Consol. Research Co.
Corbett Science Labs.
Dale Products
Daven Co.
Dmeter Mfg.
Eastern Prec. Resistor
Electro Measmets., Inc.
General Radio
Gray Instr. Co.
Hycor Div.
Industrial Insts., Inc.
Instrument Resistors
Leeds & Northrup
Muirhead Instrument
Ohmite Mfg.
Phaostron Co.
Physics Res. Labs., Inc.
Pimex, Inc.
Precision Resistor Co.
RHO Engrg. Co.
Research Instr. Co.
Rubicon Co.
Shallcross Mfg.
Tech Labs., Inc.
Teletronics Labs., Inc.
Telex, E-A Div.
Winslow Co., Inc.

RESISTORS, Deposited Carbon

Aerovox Corp.
Arnhold Ceramics
Brit. Electronic Sales
Clarostat Mfg.
Computer Instruments
Continental Carbon
Dale Products
Daven Co.
Electra Mfg. Co.
Erie Resistor
Hi-Q Div.
International Resistance
Mallory & Co., P. R.
Mepco, Inc.
Newark Electric Co.
Phaostron Co.
Pyrofilm Resistor
Shallcross Mfg.
Sprague Electric
Texas Insts., Inc.
Victoreen Instr. Co.
Welwyn International
Wirt Co.

RESISTORS, Encapsulated

Aerovox Corp.
Allen-Bradley
Bond Elect. Corp.
Brit. Electronic Sales
Cinema Engrg. Co.
Clarostat Mfg.
Continental Carbon
Corbett Science Labs.
Consol. Research Co.
Corning Glass Works
Dale Products
Daven Co.
Dmeter Mfg.
Eastern Prec. Resistor
Electra Mfg. Co.
Electro Insts., Inc.
Hycor Div.
Instr. Resistors Co.
International Resistance
K-F Devel. Co.
Mepco, Inc.
Ohmite Mfg. Co.
Polytechnic Res. & Devel.
Precision Resistor Co.
Reon Resistor Corp.
Resistance Prods. Co.
Shallcross Mfg.
Spicer Co., Walter
Sprague Electric Co.
Texas Instrs., Inc.
Victoreen Instr. Co
Welwyn International
Wirt Co.

RESISTORS
DECADE

- Decade steps from 0.1 to 1,000,000 ohms.
- Accuracy: ±0.25% on 0.1 and 1 ohm steps. ±0.1 on all others.
- One through Seven dial models available.

Write for complete catalog

Industrial Instruments Inc.
89 Commerce Road. Cedar Grove. Essex County. N. J

For more information circle **297** on inquiry card.

RESISTORS, High Frequency

Aerovox Corp.
Arnhold Ceramics
Beck Bros.
Black, Sivalls, & Bryson
Bond Elect. Corp.
Brit. Electron. Sales
Chicago Telephone Sup.
Clark Controller
Clarke Instr. Corp.
Clarostat Mfg. Co.
Corning Glass Works
Dale Products
Daven Co.
Empire Devices
Erie Resistor
Fish-Schurman
GE, Apparatus Sales
General Radio
Goodyear Aircraft
Hardwick, Hindle, Inc.
Instrument Resistors Co.
International Resistance
I. T. E. Circuit Breaker
Julie Res. Labs.
Kay Electric
Leeds & Northrup
Madison Elect. Prods. Div.
Measurements Corp.
Metavac, Inc.
Model Engrg. & Mfg.
Mepco, Inc.
Ohio Carbon Co.
Ohmite Mfg. Co.
Phaostron Co.
Polarad Electronics
Polytechnic Res. & Devel.
Pyrofilm Resistor
Rex Rheostat
Resistance Prods. Co.
Sangamo Electric
Shallcross Mfg.
Sprague Electric
Technology Instr. Div.
WacLine, Inc.
Ward Leonard
Welwyn International
White Indust. Div., S. S.
Wirt Co.
Zenith Optical Lab.

RESISTORS, High Megohm

Aerovox Corp.
Allen-Bradley Co.
Arnhold Ceramics
Bond Elect. Corp.
Clarostat Mfg.
Corbett Science Labs.
Corning Glass Works
Dale Products
Daven Co.
Dmeter Mfg.
Federal Telephone & Radio
International Resistance
Mepco, Inc.
Ohio Carbon Co.
Osborne Electric
Pyrofilm Resistor
RHO Engrg. Co.
Reon Resistor
Resistance Prods. Co.
Shallcross Mfg.
Sprague Electric
Stackpole Carbon
Victoreen Instr. Co.
Welwyn International
Westinghouse Electric
White Indust. Div., S. S.
Winslow Co.

RESISTORS, High Voltage

Arnhold Ceramics
Associated Research
Beck Bros.
Black, Sivalls & Bryson
Bond Electronics
Chicago Telephone Sup.
Clark Controller Co.
Clarostat Mfg. Co.
Corbett Science Labs.
Corning Glass Works
Cutler-Hammer
Dale Products
Dmeter Mfg.
GE, Apparatus Sales
Hardwick, Hindle, Inc.
Instrument Resistors Co.
International Resistance
I. T. E. Circuit Breaker
J B L Instr. Co.
K-F Devel. Co.
Kay Electric
Lectrohm, Inc.
Madison Elect. Prods. Co.
Mepco, Inc.
Micro-Circuits Co.
Ohio Carbon
Ohmite Mfg.
Precision Resistor Co.
RHO Engrg. Co.
Reiner Electronics
Resistance Prods. Co.
Sensitive Res. Instr.
Shallcross Mfg.
Simpson Electric
Sprague Electric
Victoreen Instr. Co.
Ward Leonard
Welwyn International
Westinghouse Electric
Weston Electcl. Instr.
White Indust. Div., S. S.

RESISTORS, Manganin
Aerovox Corp.
Associated Research
Avion Instr. Corp.
Beck Bros.
Black, Sivalls & Bryson
Bond Electronics
Brown Electro-Measmt.
Cinema Engrg. Co.
Corbett Science Labs.
Dale Products
Daven Co.
De Jur-Amsco
Dmeter Mfg.
Eastern Prec. Resistor
Electro Insts., Inc.
Electro-Mec Laboratory
Electronic Devel. Lab.
Federal Instr. Co.
General Radio Co.
Gray Instr. Co.
Hardwick, Hindle, Inc.
Helco Prods. Corp.
Hycor Co., Inc.
I. T. E. Circuit Breaker
Instrument Resistors Co.
Jarvis Electronics Corp.
K-F Devel. Co.
Leeds & Northrup
Madison Elect. Prods. Div.
Mepco, Inc.
Norton Electrical
Ohmite Mfg.
Osborne Electric
Pimex, Inc.
Precision Line Inc.
Precision Resistor Co.
RHO Engrg. Co.
Radio City Products
Ram Meter, Inc.
Reiner Electronics
Reon Resistor Corp.
Research Instr. Co.
Resistance Prods. Co.
Rubicon Co.
Sensitive Res. Instr.
Shallcross Mfg.
Spicer Co., Walter
Sprague Electric
Westinghouse Electric
Winslow Co., Inc.

RESISTORS, Molded
Aerovox Corp.
Allen-Bradley
Beck Bros.
Bond Electronics
Cinema Engrg. Co.
Clarostat Mfg.
Consol. Molded Prods.
Dale Products
Daven Co.
Eastern Prec. Resistor
Electra Mfg. Co.
Erie Resistor Corp.
GE
Glass Products
Hycor Co., Inc.
I. T. E. Circuit Breaker
Instr. Resistors Co.
International Resistance
Keystone Carbon
Lectronic Research Labs.
Mallory & Co., P. R.
Mepco, Inc.
Model Engrg. & Mfg.
Ohio Carbon
Ohmite Mfg. Co.
Precision Parts
Precision Resistor Co.
RHO Engrg. Co.
Radio City Products
Reiner Electronics
Reon Resistor
Resistance Prods. Co.
Shallcross Mfg.
Speer Carbon
Sprague Electric
Stackpole Carbon
Ward Leonard
White Dental Mfg. Co
White Indust. Div., S. S.
Wirt Co.

RESISTORS, Negative Temperature Coefficient
Arnhold Ceramics, Inc.
Bendix-Friez
Black, Sivalls & Bryson
Bond Electronics
Brit. Electronic Sales
Clarostat Mfg.
Corbett Science Labs.
Corning Glass Works
Dale Products
Daven Co.
Dmeter Mfg.
Electra Mfg. Co.
Erie Resistor
Federal Telephone & Radio
GE, Metall. Prods.
Keystone Carbon
Mepco, Inc.
Micro-Circuits Co.
Model Engrg. & Mfg.
Narda Corp.
Ohio Carbon
Phaostron Co.
Polytechnic Res. & Devel.
Prec. Resistance Co.
Pyrofilm Resistor
RHO Engrg. Co.
Reon Resistor
Rex Rheostat
Shallcross Mfg.
Sprague Electric
States Co.
Stupakoff Div.
Texas Instrs., Inc.
Tru-Ohm Prods. Div.
Victoreen Instr. Co.
Victory Engrg. Corp.
Welwyn International
White Indust. Div., S. S.

RESISTORS, Non-Inductive
Allen-Bradley Co.
Arnhold Ceramics
Associated Research
Automatic Electric
Avion Instr. Co.
Black, Sivalls & Bryson
Bond Electronics
Brit. Electronic Sales
Brown Electro-Measmt.
Cinema Engrg. Co.
Clarostat Mfg. Co.
Consol. Research Co.
Continental Carbon
Corbett Science Labs.
Corning Glass Works
Dale Products
Daven Co.
Dmeter Mfg.
Eastern Prec. Resistor
Electra Mfg. C.
Electro-Measmts. Inc.
Electro-Mec Lab.
Elektro-Serv Co.
GE
General Radio
Gray Instr. Co.
Hardwick, Hindle, Inc.
Hycor Co.
Instrument Resistors Inc.
International Resistance
Ircal Industries
I. T. E. Circuit Breaker
K-F Devel. Co.
Kay Electric
Lectrom, Inc.
Leeds & Northrup
Mepco, Inc.
Model Engrg. & Mfg.
Micro-Circuits Co.
Muirhead Instrument
Ohio Carbon
Ohmite Mfg.
Osborne Electric
Phaostron Co.
Physics Research
Polytechnic Res. & Devel.
Precision Resistance Co.
Precision Resistor Co.
Pyrofilm Resistor
RHO Engrg. Co.
Reon Resistors Corp.
Reosearch Instr. Co.
Resistance Prods. Co.
Resistors, Inc.
Rex Rheostat
Rubicon Co.
Sangamo Electric
Shallcross Mfg. Co.
Spicer Co., Walter
Sprague Electric
States Co.
Texas Insts. Inc.
Tru-Ohm Prods. Div.
Ward Leonard
Welwyn International
Western Radiation Lab.
Weston Electcl. Instr.
Winslow Co., Inc.
Wirt Co.

RESISTORS, Precision (accuracy better than 1%)
Aerovox Corp.
Arnhold Ceramics
Bond Electronics
Cinema Engrg. Co.
Clarostat Mfg. Co.
Consol. Res. Co.
Corbett Science Labs.
Corning Glass Works
Dale Products
Daven Co.
Daystrom Instrument
Dmeter Mfg.
Eastern Prec. Resistor
Eastern Specialty Co.
Edcliff Instruments
Electra Mfg. Co.
Electro Insts., Inc.
Electro Measmts., Inc.
Electromath Corp.
Electro-Mec Lab.
Electronic Prods. Co.
Eppley Lab.
Fairchild Camera
GE
General Radio
General Winding Co.
Glass Products
Gray Instr. Co.
Hardwick, Hindle, Inc.
Helco Products
Herzog Miniature Lamp
Hycor Div.
Instr. Resistors Co.
International Resistance
Jarvis Electronics
Julie Res. Labs.
K-F Devel. Co.
Kelvin Electric Co.
Keystone Carbon
Leeds & Northrup
Mepco, Inc.
Metavac, Inc.
Micro-Circuits Co.
Model Engrg. & Mfg.
Morrill & Morrill
Muirhead Instrument
Natl. Technical Labs.
Ohmite Mfg.
Osborne Electric
P.C.A. Electronics
Phaostron Co.
Pimex, Inc.
Polytechnic Res. & Devel.
Precision Line, Inc.
Precision Resistor Co.
Pyrofilm Resistor
RHO Engrg. Co.
Reon Resistor Corp.
Research Instr. Co.
Resistance Prods. Co.
Rubicon Co.
Sage Electronics
Servonic Instruments
Shallcross Mfg.
Spectrol Electronics Div.
Spicer Co., Walter
Sprague Electric Co.
Technique Associates
Texas Insts., Inc.
Victoreen Instr. Co.
Ward Leonard Elec. Co.
Westinghouse Electric
Weston Elect. Inst.

RESISTORS, Tape
B & H Instr. Co.
Gray Instr. Co.
Gulton Industries
Hansen Electronics
Micro-Circuits Co.
Phaostron Co.
Sanders Assocs.

RESISTORS, Temperature Sensitive, see Thermistors

RESISTORS, Voltage Sensitive, see Varistors

RESISTORS, Wire Wound (2 watts and under)
Aerovox Corp.
Automatic Electric
Bond Electronics
Bourns Labs.
Brit. Electronic Sales
Centralab Div.
Cinema Engrg. Co.
Clark Controller
Clarostat Mfg. Co.
Consol. Res. Co.
Corbett Science Labs.
Dale Products
Daven Co.
Daystrom-Pacific
Dmeter Mfg.
Eastern Prec. Resistor
Edcliff Instruments
Electro-Measurements
Electromath Corp.
Electro-Mec Laboratory
GE
General Radio
Hycor Div.
Instr. Resistors Co.
Insuline Corp.
International Resistance
K-F Devel. Co.
Kelvin Electric Co.
Lectrohm, Inc.
Mallory & Co., P. R.
Mepco, Inc.
Muirhead Instrument
Newark Electric Co.
Ohio Carbon Co.
Ohmite Mfg. Co.
Osborne Electric
Phaostron Co.
Precision Resistor Co.
RHO Engrg. Co.
Research Instr. Co.
Resistance Prods. Co.
Resistors, Inc.
Rubicon Co.
Servonic Instruments
Shallcross Mfg.
Spectrol Electronics Div.
Spicer Co., Walter
Texas Insts., Inc.
U. S. Instr. Corp.
Ward Leonard Elec. Co.
Welwyn International
Winslow Co.
Wirt Co.

RESISTORS, Wire Wound, (2 to 35 Watts) (see also Rheostats)
Aerovox Corp.
Arnhold Ceramics
Brit. Electronic Sales
Centralab Div.
Clark Controller
Clarostat Mfg.
Dale Products
DeJur-Amsco
Electromath Corp.
GE, Apparatus Sales
General Radio
Hardwick, Hindle, Inc.
Instr. Resistors Co.
International Resistance
Kelvin Electric Co.
Lectrohm, Inc.
Mallory & Co., P. R.
Mepco, Inc.
Model Engrg. & Mfg.
Newark Electric Co.
Ohio Carbon
Ohmite Mfg.
Resistors, Inc.
Sage Electronics
Shallcross Mfg.
Sprague Electric
Tru-Ohm Prods. Div.
Ward Leonard
Welwyn International
Westinghouse Electric
Wirt Co.

RESISTORS, Wire Wound (35 to 500 Watts) (see also Rheostats)
Aerovox Corp.
Arnhold Ceramics
Bond Elect. Corp.
Brit. Electronic Sales
Clark Controller
Clarostat Mfg. Co.
Cutler-Hammer
Dale Products
GE, Apparatus Sales
Electromath Corp.
Hardwick, Hindle, Inc.
International Resistance
Lectrohm, Inc.
Mallory & Co., P. R.
Microloc Corp.
Model Engrg. & Mfg.
Monitor Controller Co.
Newark Electric Co.
Ohio Carbon Co.
Ohmite Mfg. Co.
Resistors, Inc.
Rex Rheostat
Shallcross Mfg. Co.
Sprague Electric
Tru-Ohm Prods. Div.
Ward Leonard
Welwyn International
Westinghouse Electric
Wirt Co.

RESISTORS, Wire Wound, (500 to 1500 watts) (see also Rheostats)
Brit. Electronic Sales
Clark Controller Co.
Cutler-Hammer
GE Apparatus Sales
Mallory & Co., P. R.
Model Engrg. & Mfg.
Mullenbach Div.
Ohmite Mfg. Co.
Rex Rheostat
Shallcross Mfg. Co.
Tru-Ohm Prods. Div.
Ward Leonard
Westinghouse Electric

RESISTORS, Woven
Clarostat Mfg. Co.
Leeds & Northrup
Model Engrg. & Mfg.
Rex Rheostat
States Co.

RESOLVERS, see Synchros

RESTORERS, Thermocouple, see Thermocouple Circuit Tester

When Using This Guide look under the variable, e.g., Pressure Gages (not Gages, Pressure); or look under the noun—Magnets, Permanent (not Permanent Magnets).

Otto Wolff *Precision* **STANDARD Resistors**

OTTO WOLFF precision standard resistors offer the following features:

- Accuracy of ±0.01% on all models over entire current range
- 1, 10, 25-watts for air or oil immersion
- Special units to 3000 amp.
- Wide variety of ranges
- Excellent stability and temperature characteristics
- Moderate cost

Otto Wolff Berlin
Manganin
0.01 abs. Ohm
bei 20° C
max. 10 A
12087/55

0.01 ohm, 1-watt standard resistor.

IN STOCK

The OTTO WOLFF precision standard resistors are world famous. They are used by all of the leading laboratories in both the U. S. and Europe. No other resistors combine accuracy, range of values, versatility and construction to the degree found in OTTO WOLFF standard resistors. Also available are Wolff bridges and potentiometers.

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Berlin.

Representatives for OTTO WOLFF: C. P. GOERZ—VIENNA • EMA—ZURICH

For complete details of OTTO WOLFF resistors, request Catalog N-6

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Bausch & Lomb
Bendix-Eclipse-Pioneer
Bronoptics Co.
Brunson Inst. Co.
Buhl Optical
Bushnell Optical
Davidson Mfg.
Dearborn Glass
Dearborn Scientific
Eastman Kodak Co.
Edmund Scientific
Edna Lite Co.
Ercona Corp.
Engineers Specialty Div.
Engis Equipt. Co.
Farrand Optical
Ferner Co., R. Y.
Fish-Schurman
Gaertner Scientific
Glass Prods.
Glendale Optical
Goerz Amer. Optical
Gurley, W. & L. E.
International Optical
Herd & Co.
Jaegers, A.
Koehler, W. F.
Leroy Clausing Co.
Levy & Co., Max
Lynn, Robert M.
Meyer Opticraft
Mico Instr. Co.
Model Engrg. & Mfg.
Molded Insulation Co.
Nichols, Lyman
Pacific Univ. Prods. Corp.
Palos Optical
Photoplating Co.
Plummer & Kershaw
Practo Photo Accs. Corp.
Precision Prods. Co.
Ransom Labs.
Regal Instr. Co.
Renick Co., L. C.
Schneider-Cogswell
Tinsley Labs.
Texas Insts., Inc.
Zenith Optical Co.
Zenith Optical Lab.

REVOLUTION COUNTERS, see Counters, also Tachometers

RHEOSTATS, Battery Charging
Allen-Bradley
Amperite Co.
Beck Bros.
Black, Sivalls & Bryson
Centralab Div.
Clark Controller Co.
DeJur-Amsco
Hardwick, Hindle, Inc.
International Resistance
Mallory & Co., P. R.
Mepco
Model Engrg. & Mfg.
Natl. Elect. Controller
Ohmite Mfg. Co.
Rex Rheostat
Tru-Ohm Prods. Div.
Ward Leonard

RHEOSTATS, Field
Black, Sivalls & Bryson
Clark Controller Co.
Clarostat Mfg.
Corbett Science Lab.
Cutler-Hammer
Daven Co.
Dittmore & Freimuth
GE, Apparatus Sales
Hardwick, Hindle, Inc.
Mallery & Co., P. R.
Model Engrg. & Mfg.
Natl. Elect. Controller
Ohmite Mfg. Co.
Rex Rheostat
Tru-Ohm Prods. Div.
Ward Leonard

RHEOSTATS, Laboratory and/or Meter Testing
Ace Glass Inc.
Allen-Bradley
Amer. Instr. Co.
Beck Bros.
Beckman Instr. Div.
Biddle Co., Jas. G.
Black, Sivalls & Bryson
Borg Equipt. Div.
Bourns Labs.
Brown Electro-Measmt.
Central Scientific
Chicago Apparatus Co.
Clarostat Mfg.
Corbett Science Lab.
Daven Co.
DeJur-Amsco
Eastern Spec. Co.
Edcliff Instruments
Electro-Mec Lab.
Electronic Associates
Electro-Tech Equip.
Ford Engrg. Co.
G-M Labs.
GE, Apparatus Sales
General Radio Co.
Gray Instr. Co.
Hardwick, Hindle, Inc.
Helipot Div.
Leeds & Northrup
Mallory & Co., P. R.
Model Engrg. & Mfg.
Natl. Elect. Controller
Ohmite Mfg.
Perkin-Elmer
Research Instr. Co.
Rex Rheostat
Rubicon Co.
Samarius Electronics
Schaefer Bros.
Shallcross Mfg.
States Co.
Sticht Co., Herman H.
Tech Labs., Inc.
Technology Instr. Div
Thwing-Albert
Tru-Ohm Prods. Div.
Ward-Leonard
Welch Mfg. Co., W. M.
Zeiss, Inc., Carl

RHEOSTATS, Slide Wire and Variable (see also Resistors)
Ace Electronics
Allen-Bradley
Amer. Instr. Co.
Amperite Co., Inc.
Analogue Controls
Beck Bros.
Beckman Instr. Div.
Biddle Co., James G.
Black, Sivalls & Bryson
Borg Equipt. Div.
Bourns Labs.
Brown Electro-Measmt.
Carter Parts Co.
Central Scientific
Chicago Apparatus Co.
Cinema Engrg. Co.
Clark Controller Co.
Computer Instruments
Corbett Science Labs.
Cutler-Hammer
Daven Co.
DeJur-Amsco
Eastern Specialties
Edcliff Instruments
Electro-Measurements
Electro-Mec Lab.
Ford Engrg. Co.
G-M Labs., Inc.
Gallien, R. P.
GE
General Radio Co.
Giannini & Co.
Gray Instr. Co.
Hardwick, Hindle, Inc.
Helipot Corp.
Jadow Inc., B.
Jarvis Electronics
Jelliff Mfg. Co.
Leeds & Northrup
Mallory & Co., P. R.
Model Engrg. & Mfg.
National Elect. Controller
Ohmite Mfg. Co.
Perkin-Elmer
Precision Line Inc.
Precision Parts Co.
Precision Resistor Co.
Research Instr. Co.
Rex Rheostat
Rubicon
Samarius Electronics
Shallcross Mfg.
Spectrol Electronics Div.
Stackpole Carbon
Standard Science Supply
Sticht Co., Herman H.
Tech Labs., Inc.
Technology Instr. Div.
Thwing-Albert
Tru-Ohm Prods. Div.
U. S. Instr. Corp.
Van Dyke Instruments
Vectron, Inc.
Ward Leonard
Welch Mfg. Co., W. M.
Winslow Co.
Wirt Co.

RIBBON, Metal, Rolled to Small Fractional Dimensions
Alpha Metals
Aluminum Co. of Amer.
Amer. Platinum Works
Amer. Silver Co.
Arnold Engrg. Co.
Baird-Atomic
Belmont Smelting
Bishop & Co., J.
Cohn Corp., Sigmund
Driver-Harris
Electro Insts., Inc.
Fineisen, A. R.
Ney Co.
Penn Precision Prods.
Phosphor Bronze Smltg.
Precision Prods. Co.
Secon Metal Corp.
Sylvania Elect. Prods.
Wilson Co., H. A.

RIDEOMETERS, Ride Comfort Recorders and Riding-quality Instruments
Brush Electronics
Calidyne Co.
Commercial Research
Impact Register Co.
Jaeger Watch
Saxl Instr. Co.
Sperry Products
Testing Machines Inc.

RINGS, COLLECTOR, see Slip Rings

RODS, Amber
Amber Guild, Ltd.
Fish-Schurman

RODS, Beryllium-Copper
Belmont Smelt. & Ref.
Beryllium Corp.
Driver Co., Wilbur B.
Heitz, Karl, Inc.
Instruments Spec. Co.
Mallory & Co., P. R.
Radial Metal Prod.
Res. Devel. Manufacture
Scovill Mfg. Co.
Sylvania Elect. Prods.
Wilson Co., H. A.

RODS, Ceramic, Plain or Metallized
Centralab Div.
Corning Glass Works
Du-Co Ceramics
Electronic Mech., Inc.
Fish-Schurman
General Ceramics
Insuline Corp.
Lapp Insulator
Leroy Clausing Co.
McDanel Refractory
Saxonburg Ceramics
Steatite Div.
Stupakoff Div.
Superior Steatite
Technical Soldering Co.
Thermo Materials, Inc.
Thor Ceramics, Inc.
U. S. Stoneware Co.

RODS, Fused Quartz
Ace Glass
Amersil Co.
Bliley Electric
Edna Lite Co.
Fish-Schurman
GE, Lamp Dept.
Greiner Glassblowing Lab.
Hanovia Chem. & Mfg.
Phoenix Prec. Instr.
Prec. Glass Prod. Co.
Regal Instr. Co.
Thermal Syndicate, Ltd.
Therm. Amer. Fsd. Quartz
Torrance Glass & Color
Valpey Crystal Corp.

RODS, Glass
Ace Glass
Bache & Co., Semon
Bird & Co.
Bushnell Co., D. P.
Corning Glass Works
Crystal Glass Tube
Edna Lite Co.
Fish-Schurman
Friedrich & Dimmock
Glasscraft Co.
Greiner, Emil
Greiner Glassblowing Lab.
Kimble Glass Co.
Kontes Glass
Naer Corp.
Nester Co., L. G.
Northrop Anaheim
Owens-Illinois
Palos Optical
Prec. Glass Prods. Co.
Regal Instr. Co.
Smith Co., Arthur F.
Stupakoff Div.
Torrance Glass & Color
Uhrig Co.

RODS, Hard Rubber and Plastic
Ace Plastic Co.
Allegheny Plastics
Amer. Hard Rubber
Amer. Phenolic
Auburn Mfg. Co.
Bakelite Div.
Bel-Art Products
Biggs Co.
Blum & Co., Julius
Carbide & Carbon
Commercial Plastics
Continental-Diamond Fibre
Crane Packing
Dow Chemical
DuPont
Dura Plastics
Dynakon Corp.
Eastern Prec. Resistor
Electronic Mechanics
Emerson & Cuming
Formica Co.
Friedrich & Dimmock
Garlock Packing
GE Laminated Prods.
Goodrich Co., B. F.
Haynes Stellite
Hermes Engravers
Illinois Tool Works
Insulation Mfrs. Corp.
Insuline Corp.
Internat. Prods. Co.
Luzerne Rubber
Mica Insulator
Monsanto Chemical
National Vulcanzd. Fibre
Phipps & Bird
Polymer Corp.
Printloid, Inc.
Resistoflex Corp.
Rex Corp.
Richardson Co.
Rohm & Haas
Spaulding Fibre Co.
Stokes Molded Prods.
Synthane Corp.
Thor Ceramics, Inc.
U. S. Gasket Co.
U. S. Rubber Co.
Valley National Corp.
Wilmington Fibre

RODS, Pinion, Drawn Shapes
Amer. Brass
Chicago Screw Co.
Crucible Steel
Ferner Co.
Geartronics Corp.
Heitz, Inc., Karl
Mico Instr. Co.
Res. Devel. Manufacture

RODS, Platinum and Precious Metals
Alpha Metals, Inc.
Amer. Platinum Works
Baker & Co.
Bishop & Co., J.
Cohn Corp., Sigmund
Deringer Metallurgical
Fineison A. R.
General Plate Div.
Handy & Harman
Linde Co.
Newall Mfg. Co.
Ney Co.
Secon Metal Corp.
Sherman & Co.
Wilson Co., H. A.

RODS, Sapphire
Bird & Co.
Elgin Natl. Watch
Ferner Co., R. Y.
Gatti, Aurele M.
Imetra Co. Ltd.
Kearfott Co., Inc.
Keller, Jr., Hugo P.
Keller & Co., L. H.
Linde Co.
Vallorbs Jewel Co.
Worley Jewel Co.

RODS, Thermostat Metal
Baker & Co.
General Plate Div.
Simonds Saw & Steel
Wilson Co., H. A.

ROSINS
Alpha Metals, Inc.
Division Lead Co.
Good, Inc., James
Harshaw Chemical
Zophar Mills, Inc.

ROTAMETERS, see Flowmeters, Area

ROUGES, Optical and Lens Polishing
Amer. Hard Rubber
American Optical
Bausch & Lomb
Buhl Optical
Dixon, Inc.
E & W Optical Co.
Fish-Schurman
Gallien, R. P.
Goodrich Co., B. F.
Jadow Inc.
King & Malcolm
Morris Co., J. L.
Newall Mfg. Co.
Palos Optical
Protective Coatings
Rhodes & Co.
Scherr Co.
Wagner Co., Inc.

RUBBER, Extruded
Armstrong Cork Co.
Atlantic India Rubber Co.
Auburn Mfg. Co.
Felt Prods. Mfg.
Garlock Packing Co.
General Tire
Goodrich Co., B. F.
Goodyear Tire
Hamilton Rubber Mfg.
Luzerne Rubber Co.
Raybestos-Manhattan
Republic Rubber Div.
Rubatex Div.
Staver Co., Inc.
Stokes Molded Prods.
U. S. Rubber Co.

RUBBER, Gaskets, see Gaskets

RUBBER, Lathe Cut
Armstrong Cork Co.
Atlantic India Rubber Co.
Auburn Mfg. Co.
Detroit Gasket Mfg. Co.
Felt Prods, Mfg.
Garlock Packing Co.
General Tire
Goodrich Co., B. F.
Goodyear Tire
Goshen Rubber
Hamilton Rubber Mfg.
Luzerne Rubber Co.
Raybestos-Manhattan
Republic Rubber Div.
Staver Co., Inc.
U. S. Rubber Co.

RUBBER, Hard, Molded Parts
Acushnet Process Co.
Amer. Hard Rubber Co.
Ampco Mfg. Co.
Armstrong Cork Co.
Atlantic India Rubber
Auburn Mfg. Co.
Bacon Industries
Federal Screw Prods.
Felt Prods. Mfg.
Garlock Packing Co.
General Tire
Goodrich Co., B. F.
Goodyear Tire
Graton & Knight Co.
Hamilton Rubber
Joy Mfg. Co.
Luzerne Rubber Co.
Raybestos-Manhattan
Richardson Co.
Republic Rubber Div.
Specialty Insuln. Mfg.
Stokes Molded Prods.
Taylor Mfg. Co.
U. S. Rubber Co.
Vibration Mountings

RUBBER, Sponge
Amer. Forest Prods.
Armstrong Cork Co.
Atlantic India Rubber
Auburn Mfg. Co.
Federal Screw Prods.
Felt Prods. Mfg.
Garlock Packing
Goodrich Co., B. F.
Goodyear Tire
Peerless Rubber Co.
Pierce-Roberts
Republic Rubber Div.
Rubatex Div.
U. S. Rubber Co.
Vibration Mountings

RUBBER STOPPERS, see Laboratory Apparatus

RUBBER SUBSTITUTES
Acushnet Process Co.
Ampco Mfg. Co.
Armstrong Cork Co.
Auburn Mfg. Co.
Bakelite Div.
Blossom Mfg. Co.
Canfield Rubber Co.
Carbide & Carbon
Carroll Co.
Detroit Gasket & Mfg.
Dow Chemical Co.
DuPont
Durite Plastics
Felt Prods. Mfg.
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Western Rubber Co.

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American Research Corp.
Amthor Testing
Ann Arbor Inst. Wks.
Atlantic Research Corp.
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Baldwin-Lima-Hamilton
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Bush Assocs., G. F.
Central Scientific
Chatillon & Sons
Custom Scientific Insts.
Dillon & Co.
Emerson App. Co.
Epic, Inc.
Federal Prods. Corp.
Ferner Co.
Fish-Schurman
Gogan Machine Corp.
Gordon Co., Claud S.
Hacker & Co.
Instron Engrg. Corp.
Kinetic Instr. Co.
Link Engrg. Co.
MacDonald Co., W. S.
National Forge
Olsen Testing Machine
Pacific Transducer Corp.
Precision Scientific
Riehle Div.
Scott Testers, Inc.
Shore Instr. & Mfg. Co.
Steel City Testing
Taber Instr. Corp.
Testing Machines, Inc.
Thwing-Albert Co.
U. S. Testing Co.
Van Keuren Co.
Wabash Metal Prod.

RULES, Adjustable Curve, see Drawing Instruments

RULES, Including Aluminum, Brass, Stainless Steel and Steel
Allied Engraving
Alteneder & Sons
American Measuring Insts.
Anderson & Sons
Bliss & Co.
Bowen & Co.
Brown & Sharpe
Bruning Co.
Carroll Co.
Chicago Thrift Etching
Dietzgen Co.
DoAll Co.
Engis Equipt. Co.
Gaertner Scientific
Grammes & Sons
Gurley Co., W. & L. E.
Keuffel & Esser
Lufkin Rule
Mico Instr. Co.
Miller Dial & Name Pl.
Millers Falls Co.
Renick Co.
Scherr Co., Inc.
Speidel & Co.
Stanley Works
Starrett Co.
Stratex Instr. Co.
U. S. Radium Corp.
Warren-Knight
Weber Co.

RULES, Caliper, see Dimensional Gages, Mechanical

RULES, Drafting Room, see Drawing Instruments

RULES, Glass
Bushnell Optical
Davidson Mfg. Co.
Dusenbery Co.
Edna Lite Co.
Engineers Specialty Div.
Engis Equipt. Co.
Ferner Co.
Fish-Schurman
Gaertner Scientific
Glass Engraving
Glass Products
Glasscraft Co.
Gurley Co., W. & L. E.
H & O Mfg. Co.
International Optical
Koehler, W. F.
Kontes Glass
Levy & Co.
Lufkin Rule
Lynn, Robert M.
Marsco Mfg.
Mico Instr. Co.
Nichols, Lyman
Nikon, Inc.
Palos Optical
Penn Optical & Instr.
Photoplating Co.
Renick Co.
Scientific Glass App.
Teichert Engrg. Co.

RULES, Parallel
Allied Engraving
Amer. Meas. Insts.
Bliss & Co.
Bruning Co.
Carlynn Engrg. Co.
Dietzgen Co.
Hamilton Mfg. Co.
Keuffel & Esser
Lufkin Rule
Marine Compass Co.
Negus, T. S. & J. D.
Opplem Co.
Post Co., Frederick
Speidel & Co.
Starrett Co., L. S.
Warren-Knight
White Co., Inc.
Weber Co.

RULES, Precision Standard
Allied Engraving
Amer. Measuring Insts.
Bowen & Co.
Brown & Sharpe
DoAll Co.
Engineers Specialty Div.
Engis Equipt. Co.
Gaertner Scientific
Griswold Mfg. Co.
Gurley, W. & L. E.
Lufkin Rule
Miller Falls Co.
Renick Co.
Scherr Co.,
Starrett Co.
Univ. Drafting Mach. Corp.

RULES, Shrinkage
Brown & Sharpe
Keuffel & Esser
Lufkin Rule
Speidel & Co.
Starrett Co.
Warren-Knight
Weber Co.

RULES, Slide, see Sliderules

RUNNING TIME RECORDERS, see Time Recorders

RUPTURE DISCS, see Pressure Relief

SACCHARIMETERS
Aloe Co., A. S.
Bausch & Lomb
Brinkmann Instruments
Central Scientific
Epic, Inc.
Ercona Corp.
Fish-Schurman
Griebel Co.
Hiergesell & Sons
Instrumentation Assoc.
Jarrell-Ash
Kimble Glass
Moeller Instr. Co.
Opplem Co.
Prec. Thermom. & Insts.
Rudolph & Sons
Sargent & Co.
Scient. Instr. Co.
Thomas Co., Arthur H.
Trerice Co.
Weksler Thermom. Corp.
Zeiss Inc., Carl

SACCHAROMETERS
Central Scientific
Fish-Schurman
Fleischauer & Son
Griebel Co.
G. M. Mfg. Co.
H. B. Instr. Co.
Kimble Glass
Moeller Instr. Co.
Opplem Co., Inc.
Owens-Illinois Glass
Prec. Therm. & Insts.
Rascher & Betzold
Ruehfel Co.
Ruttco Mfg. Co.
Scient. Instr. Co.
Taylor Instr. Cos.
Thomas Co., Arthur H.
Trerice Co.
Wagner & Son
Weksler Thermom. Corp.
Weston Electcl. Instr.

SAFETY DISCS, see Pressure Relief

SAFETY VALVES, see Valves, Relief

SALINITY INDICATORS
Bristol Co.
Central Scientific
Engineering Labs.
Fielden Instr. Div.
Fleischauer & Son
Foxboro Co.
G.M. Mfg. Co.
Gerin Corp.
Griebel Co.
Greiner, Emil
H-B Instr. Co.
I-L-S Instr. Corp.
Industrial Instruments
Instrument Lab.
J-B-L Instr. Co.
Kahl Scientific Instr.
Leeds & Northrup
Moeller Instr. Co.
Prec. Therm. & Insts.
Rascher & Betzold
Rubicon Co.
Ruehfel Co.
Ruttco Mfg. Co.
Scient. Instr. Co.
Taylor Instr. Cos.
Thwing Albert
Trérice Co.
Wagner & Son
Weksler Thermom. Corp.
Westinghouse Electric
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SALINOMETERS, see Salinity

SALT SPRAY TESTERS, See Environmental Test Chambers

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SAMPLERS, Boiler Water, see Boiler Room Instruments, also Water Analysis

SAMPLERS, Miscellaneous

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Bowser Inc.
Braun Corp.
Builders-Providence
Central Scientific
Coleman Instr. Co.
DeZurick Shower Co.
Eberbach Corp.
Exline Engrg. Co.
Geotechnical Corp.
Gilbert & Barker Mfg.
G. M. Mfg. Co.
Hagan Chem. & Controls
Hoke, Inc.
Infilco Inc.
Instruments Corp.
Johnston & Jennings
Koehler Instr. Co.
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Precision Scientific
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Research Appliance Co.
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Roy Co., Milton
Ruska Instr. Corp.
Scientific Glass App.
Shand & Jurs
Soiltest Inc.
Thwing-Albert
Vapor Recovery Systems

SAMPLERS, Oil Bottom-hole, see Oil Well Instrumentation

SAMPLERS, Sewage, see Waste Treatment

SAPPHIRE BOULES

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Carbide & Carbon Natl.
Elgin Natl. Watch
Gallien, R. P.
Imetra Co. Ltd.
Keller, Jr., Hugo P.
Keller & Co.
Linde Co.
Moser Jewel Co.
Steel Co., Herman D.
Swiss Jewel Co.
Vallorbs Jewel Co.
Warebro Jewel Co.
Worley Jewel Co. John

SAPPHIRE RODS, see Rods, Sapphire

SAPPHIRE, Special Shapes and Parts (see also Rods, Sapphire)

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Autom. Controls Corp.
Bird & Co.
Cooke, Frank
Duotone Co.
Elgin Natl. Watch
Engis Equipt.
Gatti, Aurele M.
Hamilton Watch
Imetra Co. Ltd.
Industrial Jewel Bearing
Jones Optical Works
Kastner, Charles
Keller, Jr., Hugo P.
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Linde Co
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Powers, George
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Swiss Amer. Jewel-Bear.
Swiss Jewel Co.
Synthetic Gems & Jewels
Thermo Materials, Inc.
Vallorbs Jewel Co.
Waltham Prec. Tool
Worley Jewel Co., John
Zenith Optical Lab.

SATURABLE REACTORS, see Amplifiers, Magnetic

SAUNDERS PATENT VALVES, see Valves, Diaphragm Seal, including Saunders Patent, Crane, Wynn Type, etc.

SAWS, Jeweler's Type, see Jewelers

SCALERS, Binary, see Counters, Binary

SCALERS, Decade, see Counters, Decade

SCALERS, Geiger-Mueller, see Counters, Geiger-Mueller, also Radioactivity

SCALES, see Weighing

SCALES, Drawing, see Drawing Instruments

SCALES, Instrument

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Alteneder & Sons
Amer. Laubscher
Amthor Testing
Anderson & Sons
Bastian Bros. Co.
Bruning Co., Charles
Can. Rad. & Uranium
Carroll Co.
Chatillon & Sons
Chicago Thrift-Etching
Conn-Craft Co.
Davidson Mfg.
Croname, Inc.
Detecto Scales
Diamond Instr. Co.
DuMont Labs., Allen B.
EasternEtching
Eckman Load Ind.
Edroy Products
Elect. Tachometer Corp.
Electronic Sig. & Instr.
Engis Equipt. Co.
Etched Products
Exact Weight Scale
Fairbanks, Morse
Felsenthal & Sons
Ferner Co.
Fisher Scientific
Gaertner Scientific
Gen. Etching & Mfg.
Gerber Scientific Instr.
Grammes & Sons
Gurley, W. & L. E.
H & O Mfg. Co.
Heitz, Karl, Inc.
Hopp Press, Inc.
Howe Scale
Ideal-Aerosmith
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Instr. Devel. Labs.
Levy & Co.
Marshall Chemical
Martin-Decker
Maymer Corp.
Metrogram Corp.
Miller Dial & Name Pl.
Nester Co., L. G.
Palos Optical
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Streeter-Amet
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Thayer Scale & Engrg.
Thwing-Albert
Trerice Co.
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Edison Inc., Thos. A.
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Fischer & Porter Co.
Forro Scientific
Franklin Electronics
Geotechnical Corp.
Hickok Elec. Instr.
Hogan Labs.
Ideal-Aerosmith
Jarco Services
Kybernetes Corp.
L & O Res. & Devel.
NRD Instr. Co.
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Optronic Co.
Panellit, Inc.
Photobell Co.
Radiation Inc.
Reeves Instr. Corp.
Res. Specialties
Rockwell Engrg. Co.
R. S. Electronics
Scientific Specialties
Sparton Cont. Systems
Sterling Precision
Systron Corp.
Tarc Electronics
Telecomputing Corp.
Thermo-Electric Co.
Tigerman Engrg. Co.
Times Facsimile Corp.
Viking Instruments

SCANNERS, Photoelectric for Mercurial Barometers

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Ess Instr. Co.
Hupp Electronics
Ideal-Aerosmith
Optronic Co.
Phoenix Prec. Inst.

SCANNERS, Reflected and Transmitted Light

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Alden Electron & Impulse
Bush Assoc., G. F.
DuMont Labs., Allen B.
Electronic Control Corp.
Electronics Corp. of Amer.
Fecker, Inc.
Fish-Schurman
Genl. Prec. Lab.
Geotechnical Corp.
Gordon Enterprises
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Hupp Electronics
L & O Res. & Devel.
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Magnaflux Corp.
Menlo Research Lab.
Neutronics Research
Optronic Co.
Philco Corp.
Tarc Electronics Inc.
Thermo-Electric Co.
Times Facsimile Corp.
Welch Mfg. Co.

SCINTILLATION COUNTERS, see Radioactivity

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Olsen Testing Machine
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Scherr Co., Inc.
Steel City Testing
Taber Instr. Co.
Testing Machines, Inc.
Universal Aviation

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DuPont
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GE, X-Ray Dept.
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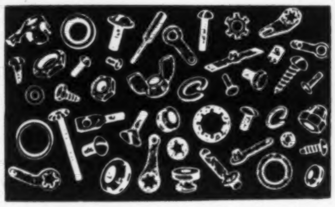

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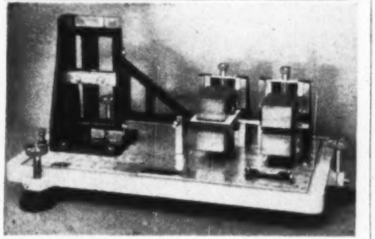

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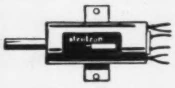
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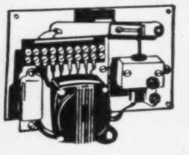
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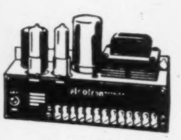
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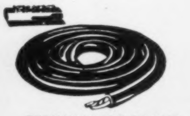
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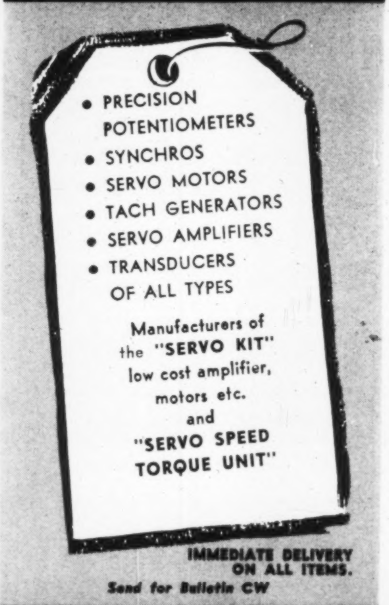
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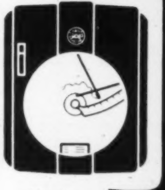
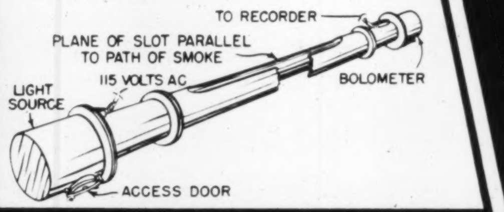


Smoke Density Recorder



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SIGHT METERS, see Flowmeters, Sight

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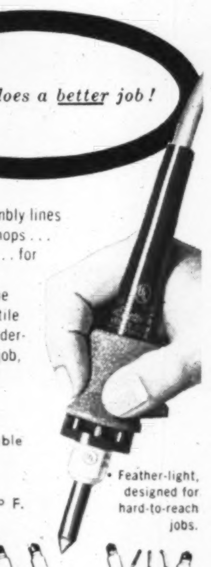
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Sickles & Sons
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Baker & Co.
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Newall Mfg. Co.
Parker Appliance Co.

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Alpha Metals
Amer. Brass Co.
Amer. Platinum Works
Amer. Silver Co.
Amer. Solder & Flux
Baker & Co.
Belmont Smelt. & Ref.
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Cerro de Pasco Corp.
Chemalloy Electronics
Diamond Instr. Co.
Division Lead Co.
Dixon, Inc., William
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Federated Metals Div.
Fusion Engrg. Co.
Gallien, R. P.
Gardiner Metal Co.
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General Plate Div.
Hi-Grade Alloy Corp.
Jadow Inc., B.
Johnson Engrg. Co.
Kester Solder Co.
Krembs Co.
L. & R. Mfg. Co.
Mico Instr. Co.
Microcircuits, Co.
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Newark Electric Co.
Ney Co., J. M.
Owens-Illinois
Secon Metal Corp.
Sherman & Co.

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Allard Instr. Corp.
Allen-Bradley
Automatic Electric
Automatic Elec. Sales
Autom. Switch
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Bunnell & Co., J. H.
B/W Controller
Cannon Elect. Devel.
Carruthers & Fernandez
Cerro de Pasco Corp.
Comar Electric
Controls Co. of Amer.
Cooper Co., Clark
Corbett Science Labs.
Cutler-Hammer, Inc.
Dalmotor Co.
Daystrom Instr. Div.
Dittmore & Freimuth
Dormeyer Industries
DuMont Labs., Inc., Allen
Electro Devices (St. Louis)
Electra Mfg. Co.
Electrical Windings
Electro-Tech Equip.
Electro Units Supp. Co.
Electronic Spec. Co.
GE, Apparatus Sales
GE Gen. Purp. Contr.
General Controls Co.
General Winding Co.
Guardian Elect. Mfg. Co.
Hays Mfg. Co.
Henschel Corp.
Houlihan Co.
Huggins Labs.
Induction Motors Corp.
Kahn & Co.
Keckley Co., O. C.
Knopp, Inc.
Leach Relay Co.
Lee Spring Co.
Leland, Inc., G. H.
Magnavox Co.
Magnecon
Natl. Aircraft Corp.
New York Transformer
Newark Electric Co.
PSP Engrg. Co.
Phaostron Co.
Phillips Control Corp.
Pollak Corp., Joseph
Raypar, Inc.
Reed & Reese
Schrader's Son, A.
Spence Engrg. Co.
Stratos Div.
Struthers-Dunn
Synchro-Start Products
Trerice Co., H. O.
Tri-Dex Electronics
Tungsten Contact Mfg.
United States Electronics
U. S. Relay Co.
Virginia Electronics
West Coast Electcl. Mfg.
Westinghouse Air Brake
Wetsinghouse Electric
Weston Electcl. Instr.
Wheeler Insulated Wire

SOLENOIDS, Rotary
Borden Engrg. Div.
Carruthers & Fernandez
Controls Co. of Amer.
Electronic Spec. Co.
Electro-Tech Equip.
Haydon Co., A. W.
Lectronics, Inc.
Leetronics, Inc.
Leland, Inc., G. H.
Magnavox Co.
Pacific Solenoids
Price Electric

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Cannon Electric
Carruthers & Fernandez
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Controls Co. of Amer.
Electronic Spec. Co.
Guardian Elect. Mfg. Co.
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DoAll Co.
Electric Sorting Mach.
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Federal Products
Hathaway Instr. Co.
Heyman Co.
Hirschmann Co., Carl
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Industrial Electronics
Indust. Gauges Corp.
Magnaflux Corp.
Magnetic Gauge Co.
Merz Engrg. Co.
Moore Products
Opto-Metric Tools
Potter Instr. Co.
Pratt & Whitney
Remington-Rand Univac
Rockwell Engrg. Co.
Rowe Engrg. Co.
Scherr Co., Inc.
Sheffield Corp.
Size Control Co.
Swedish Gage
Taft-Pierce Mfg. Co.
Warner & Swasey Res.

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Airborne Insts. Lab.
Aircraft Electronics
Alden Products
Allison Labs
Amperite Corp.
Audio Instr. Co.
Bristol Engrg. Corp.
Brush Electronics
Clough-Brengle
Daven Co.
Davenport Mfg. Co.
Donner Scientific
Dyna-Empire
Electro Prods. Lab.
Electronic Assocs.
Electronic Design Corp.
Empire Devices, Prod.
Engineering Res. & Devel.
Erwood, Inc.
Farnsworth Electronics
Feiler Engrg. Co.
Franklin Electronics
GE
General Instr. Corp.
Genl. Prec. Lab.
General Radio Co.
Hewlett-Packard
Hickock Electcl. Instr.
Kay Electric
Massa Labs. Inc.
Mine Safety Appliances
Minnesota Electronics
Muirhead Instrument
Panoramic Radio Prods.
RCA Div.
Radio City Products
Ramo-Wooldridge
Scott, Hermon Hosmer
Sound Apparatus Co.
Technical Prods. Co.
Techno Instr. Co.
Televiso Co.
Thordarson-Meissner
Tobe Deutschmann
Western Electric
Western Electro-Accoustics

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Aircraft Electronics
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Anco Instr. Div.
Ballantine Labs.
Basic Controls, Inc.
Beede Elect. Instr.
Bristol Engrg. Corp.
Brush Electronics
Chesapeake Instr. Corp.
Clough-Brengle
Computer Co. of Amer.
Daven Co.
Davenport Mfg. Co.
Dyna-Empire
Electronic Devel. Lab.
Empire Devices, Prod.
Engineering Res. & Devel.
Erwood, Inc.
Feiler Engrg. Co.
Ferris Instr. Corp.
Fisher Research Lab.
GE
General Instr. Co.
General Radio
Genzlinger, Inc.
Gulton Industries
Hickok Electcl. Instr.
Imperial Brass
Kay Electric
Kistler Instr. Co.
Marconi Instruments
Marion Electcl. Instr.
Marsh Corp., Jas. P.
Massa Labs.
Measurements Corp.
Mine Safety Appliances
Minnesota Electronics
New London Instr. Co.
Optronic Co.
Panoramic Radio Prods.
Polarad Electronics
Polytechnic Research
RCA
Radio City Products
R. S. Electronics
Ramo-Wooldrige
Reed Research
SCAM Instr. Corp.
Scott, Hermon Hosmer
Sound Appartus Co.
Stoelting Co.
Technical Prods. Co.
Techno Instr. Co.
Technology Instruments
Tobe Deutschmann
Triplett Electcl. Instr.
Western Electric
Westronics, Inc.

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Ballantine Labs.
Beede Electcl. Instr.
Bristol Engrg. Co.
Brush Electronics
Burlington Instr. Co.
Chesapeake Instr.
Clough-Brengle
Columbus Products
Computer Co. of Amer.
Dale Instruments
Daven Co.
Davenport Mfg. Co.
DeJur-Amsco
Dittmore & Freimuth
Dyna-Empire
Edmund Scientific
Electric Des. & Mfg.
Electro-Tech Equip. Co.
Electronic Devel. Lab.
Electronic Instr. Co.
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Electro-Mech. Instr.
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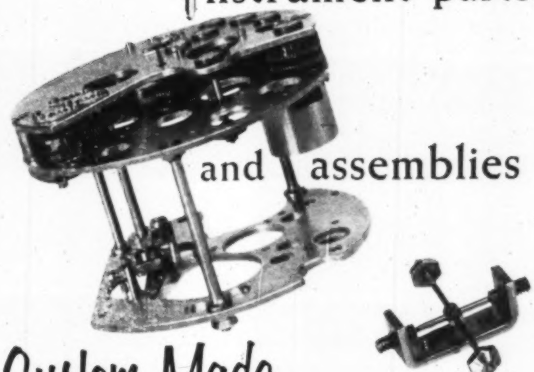

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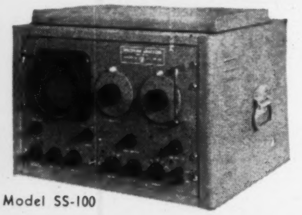

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MODEL SS-100 13.5 cycles to 110 KC Resolution to 27 cycles.
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Kistler Instr. Co.
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Marion Electcl. Instr. Co.
Massa Labs.
Meters, Inc.
Mine Safety Appliances
Phaostron Co.
Photocon Res. Prods.
Precision Apparatus Corp.
Radio City Products
RCA Div.
Scott, Hermon Hosmer
Sherron Metallic
Shallcross Mfg. Co.
Simpson Electric
Sound Apparatus Co.
Scott Hermon Hosmer
Technical Prods. Co.
Techno Instr. Co.
Texas Insts., Inc.
Trio Labs., Inc.
Triplett Electcl. Instr.
United Optical
Viking Instruments
Virginia Electronics
Westinghouse Electric
Weston Electcl. Instr.

SOUND PICKUPS, see Microphones..

SOUND STANDARDS, see Standards, Sound

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G. M. Mfg. Co.
Garlynn Engrg. Co.
Hand & Sons
Kenyon Instr. Co.
Moeller Instr. Co.
Negus, T. S. & J. D.

SOUNDING TUBES

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Leupold & Stevens
Moeller Instr. Co.
Negus, T. S. & J. D.

SPARK PLUG TESTERS, see Engine Test

SPECIFIC GRAVITY BALANCES

Baird-Atomic
Becker Div., Christian
Brinkmann Instruments
Burrell Corp.
Central Scientific
Chicago Apparatus Co.
Eberbach Corp.
Electrical Devel. Co.
Exact Weight Scale Co.
Fisher Scientific
Hadley Assoc.
Heusser Instr. Co.
Humboldt Mfg. Co.
Ohaus Scale
Pfaltz & Bauer
Refinery Supply
Roller-Smith
Seederer-Kohlbusch
Standard Science Supply
Thomas Co., Arthur H.
Toledo Scale
Torsion Balance Co.
Troemner, Henry
Welch Mfg. Co., W. M.
Will Corp.

SPECIFIC GRAVITY BOMBS

Central Scientific
Daniel Orifice Fitting
Fish-Schurman
Refinery Supply Co.

SPECIFIC GRAVITY BOTTLES

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Amer. Meter Co.
Autoclave Engrs.
Bellco Glass, Inc.
Central Scientific
Chicago Apparatus Co.
Corning Glass
Fisher Scientific
Greiner Glassblowing Lab.
Kimble Glass
Kontes Glass
Martin & Co.
Owens-Illinois
Podbielniak, Inc.
Precision Scientific
Scient. Glass App.
Specialty Glass Co.
Standard Science Sup.
Superior Meter Co.
Thomas Co., Arthur H.
Vapor Recovery Systems
Welch Mfg. Co., W. M.

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Askania Reg. Co.
Bailey Meter Co.
Bendix, Cincinnati Div.
Bristol Co.
Climax Div.
Ess Instr. Co.
Fischer & Porter Co.
Fisher Governor
Foxboro Co.
General Controls
Hagan Chem. & Controls
Hays Corp.
Instruments Inc.
Lear Inc.
Leeds & Northrup
Mason-Neilan Div.
Manning, Maxwell & Moore
Mine & Smelter Supply
Minneapolis-Honeywell Indust. Div.
Moore Products
Nuclear Research Corp.
Ohmart Corp.
Phoenix Prec. Instr.
Potter Aeronaut. Corp
Prec. Therm. & Insts.
R.K.L. Valve & Mfg. Co.
Republic Flow Meters
Richardson Scale
Roy Co., Milton
Shallcross Controls
Taylor Instr. Cos.
Weston Electcl. Instr.

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Amer. Meter Co.
Bailey Meter Co.
Baird-Atomic
Bellco Glass
Bendix, Cincinnati Div.
Bristol Co.
Brooks Rotameter
Builders-Providence
Central Scientific
Century Geophysical
Donner Scientific
Electrical Devel. Co.
Ess Instr. Co.
Exact Weight Scale Co.
Fielden Instr. Div.
Fischer & Porter Co.
Fisher Scientific
Foxboro Co.
G. M. Mfg. Co., Inc.
Greiner, Emil
Griebel Co.
H-B Instr. Co.
Hagan Chem. & Controls
Hays Corp.
Instruments Inc.
Kahl Scient. Instr.
Kimble Glass Co.
King Engrg.
Leeds & Northrup
Liquidometer Corp.
Meriam Instr. Co.
Microchemical Specialties
Minneapolis-Honeywell Indust. Div.
Moeller Instr. Co.
Moore Products
Nuclear Corp. of Amer.
Nuclear Research Corp.
Ohmart Corp.
Penn. Insts. Div.
Permutit Co.
Petrometer Corp.
Poole Instruments
Potter Aeronaut. Corp.
Precision Scientific
Prec. Thermom. & Insts.
Rascher & Betzold
Refinery Supply Co.
Republic Flow Meters
Rutteo Mfg. Co.
Schultheis Corp.
Schutte & Koerting
Scientific Glass App.
Scientific Instr. Co.
Specialty Glass Co.
Streeter-Amet
Trerice Co.
Taylor Instr. Cos.
Wallace & Tiernan
Weksler Thermom. Corp.
Weston Electcl. Instr.

SPECTRA DEMONSTRATORS

Edmund Scientific
National Carbon
National Spectrographic
Todd Scientific
Welch Mfg. Co., W. M.

SPECTRAL TUBES, Containing Rare Gases, see Spectrum Tubes

SPECTROGRAPHS

Applied Physics Corp.
Applied Research Labs.
Baird-Atomic
Bausch & Lomb
Berkeley Div.
Beva Laboratory
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Central Scientific
Consol. Electrodynamics
Dietert Co.
Epic, Inc.
Ercona Corp.
Farrand Optical
Fecker, Inc.
Fisher Scientific
Franklin Electronics
Furst Electronics
Gaertner Scientific
GE, Apparatus Sales
GE, X-Ray Dept.
Griswold Mfg. Co.
Hays Scient. App.
Henson Co.
Jarrell-Ash
Kay Electric
Kelley-Koett
Manson Labs.
National Spectrographic
North Amer. Philips
Perkin-Elmer
Precise Measmts. Co.
Process & Instruments
Phoenix Prec. Instr.
Scient. Inst. Dev. Lab.
Scientific Specialties
Spencer Lens Co.
Thomas Co., Arthur H.
Unertl Optical
Victoreen Instr. Co.
Welch Mfg. Co., W. M.
Wyland, G. C.
Zeiss, Inc., Carl

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Bristol Co.
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Consol. Electrodynamics
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Dearborn Scientific
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Farrand Optical
Gaertner Scientific
GE X-Ray Dept.
Greiner, Emil
Hamner Electronics
Jarrell-Ash
Jordan Electronics
Leeds & Northrup
Martin-Hubbard
Meyer Opticraft
NRD Instr. Co.
National Instr. Co.
Natl. Radiac, Inc.
National Spectrographic
Nuclear Corp. of Amer.
Opplem Co., Inc.
Perkin-Elmer
Precise Measmts.
QOS Corp.
Rudolph & Sons, O. C.
Schlumberger Well Surv.
Scient. Inst. Dev. Lab.
Thomas Co., Arthur H.
Unertl Optical
Varian Assocs.
Victoreen Instr. Co.
Welch Mfg. Co., W. M.
Wild Heerbrugg

SPECTROMETERS, Infrared

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Baird-Atomic
Beckman Div.
Beckman Instrs.
Consol. Electrodynamics
Farrand Optical
Gaertner Scientific
GE
Jarrell-Ash
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Liston-Becker
Marconi Instruments
Mine Safety Appliances
Perkin-Elmer
Pfaltz & Bauer
Phoenix Prec. Instr.
Precise Measmts. Co.
Servo Corp. of Amer.

SPECTROMETERS, Mass

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Beckman Div.
Bendix Aviation Corp.
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Biddle Co., James G.
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Furst Electronics
GE
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Process & Instruments
Unertl Optical
Varian Associates
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SPECTROMETERS, X-ray, see Spectrographs

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Amer. Instr. Co.
Amer. Optical
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Avion Div.
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Baird-Atomic
Bausch & Lomb
Beckman Div.
Biddle Co., James G.,
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Davidson Mfg. Co.
Dietert Co.
Ercona Corp.
Farrand Optical
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Gaertner Scientific
Gardner Laboratory
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Jarrell-Ash
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Leeds & Northrup
Librascope, Inc.
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National Spectrographic
Perkin-Elmer
Pfaltz & Bauer
Phoenix Prec. Instr.
Process & Instruments
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Wilkens-Anderson
Zeiss, Inc., Carl

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Beckman Instrs.
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GE
Greiner, Emil
Jarrell-Ash
Librascope, Inc.
National Spectrographic
Neutronics Research
Perkin-Elmer
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Process & Instruments
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Precise Measmts. Co.
QOS Corp.
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Thomas Co., Arthur H.
Todd Scientific
Unertl Optical
Welch Mfg. Co., W. M.
Zeiss, Inc., Carl

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Jarrell-Ash
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National Spectrographic
Precise Measmts. Co.
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Unertl Optical

SPECTROSCOPES, Stellar

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Ercona Corp.
Fecker, Inc.
Lab. Optical Co.
Mico Instr. Co.

Perkin-Elmer
Unertl Optical
Zeiss, Inc., Carl

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Communication Access.
Donner Scientific
Edin Co.
Electronic Associates
Farrand Optical
Federal Telephone & Radio
Franklin Electronics
Freed Transformers
Gaertner Scientific
GE, Apparatus Sales
General Radio Co.
Gerber Scientific
Hewlett-Packard
Industrial Test Equipt.
Internat. Res. & Dev.
Jarrell-Ash
Kay Electric
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Mico Instr. Co.
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Probescope Co.
Scientific Apparatus Co.
Sierra Electronic Corp.
Tech. Prods. Co.
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Polarad Electronics
Polytechnic Res. & Devel.
Probescope Co.
Radiation, Inc.
Sierra Electronic Corp.
Suffolk Prods. Co.
Vectron, Inc.

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DoAll Co.
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Farrand Optical
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Kaye Devel. Co.
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Edmund Scientific
Gaertner Scientific
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Jarrell-Ash

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Barber-Colman
Barbour Stockwell
Beckman & Whitley
Bendix, Pioneer-Central
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Dynapar Corp.
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Electric-Speed Ind. Co.
Elec. Tachometer Corp.
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Electro-Mechano Co.
Electro Products Labs.
Electro-Pulse, Inc.
Electronic Assocs.
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Engineering Res. Devel.
Engrg. Enterprises
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Fielden Instr. Div.
Foxboro Co.
Gaertner Scientific
GE, Apparatus Sales
General Radio
Gilmore Industries
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Hastings-Raydist
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Heller Co., Gerald
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Hickok Electcl. Instr.
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Hupp Instrumation
I-L-S- Instr. Corp.
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Jones-Motrola
Kay Electric
Leeds & Northrup
Manning, Maxwell & Moore
Martin-Decker Corp.
Marx Co., Clarence J.
Matisa Equipt. Corp.
McDonnell Odometer
Metron Instr. Co.
Miller Falls Co.
Minatron Corp.
Minneapolis-Honeywell
Moisture Register Co.
Norden-Ketay
Optronic Co.
Orban Co., Kurt
Pitometer Log Corp.
Potter Aeronaut. Corp
Potter Instr. Co.
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Servomechanisms, Inc.
Servonic Instruments
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Standard Elect. Time
Starrett Co.
Stewart-Warner
Sticht Co., Herman H.
Stoelting Co.
Sunshine Scientific
Systron Corp.
Torque Engineered Prod.
Tracktest Equipt. Co.
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Veeder-Root
WacLine, Inc.
Walkirt Co.
Wang Labs., Inc.
Westberg Mfg. Co.
Westport Electric
Zernickow Co.

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Allen-Bradley
B & H Instr. Co.
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Bristol Co.
Curtis Dev. & Mfg. Co.
Cutler-Hammer
Dynamic Res. Assoc.
Fasco Industries, Inc.
GE, Apparatus Sales
General Radio Co.
Halax Corp.
Heller Co., G. K.
Kahn & Co., Inc.
Larson Instrument
Magnetic Amplifiers, Inc.
Manson Labs.
Moog Valve Co.
Opad Electric
Philadelphia Gear Works
Potter Instr. Co.
Ransom Research
Reeves Pulley Div.
Reliance Elect. & Engrg.
Revco, Inc
Robertson & Ruth
Servo-Tek Prods., Inc.
Servospeed Div.
Syncro-Start Products
Taylor Instr. Cos.
U. S. Electr. Motors
Varo Mfg. Co.
Vickers Elec. Div.
WacLine, Inc.

SPEED REDUCERS and SPEED INCREASERS

Abart Gear & Mach. Co.
Alina Corp.
Atlas Precision Prod.
Barbour Stockwell
Bodine Electric
Bogue Elect. Mfg. Co.
Bowmar Instr. Corp.
Continental Mach. Spec.
Cutler-Hammer
Dietz Design & Mfg.
Elect. Tachometer Corp.
Falcon Machine & Tool
Ford Instrument Co.
GE Apparatus Sales
General Radio Co.
Gervos Instruments
Globe Industries, Inc.
Grant Gear Works
Heller Co., G. K.
Insco Company
Instrument Gear Works
Link Engrg. Co.
Magnetic Amplifiers
Master Electric
Merkle Korff Gear Co.
Metron Instr. Co.
Opad Electric
Philadelphia Gear Works
PIC Design Corp.
Reeves Pulley Div.
Reliance Elect. & Engrg.
Revco, Inc.
Scherr Co., Inc.
Servo-Tek Prods., Inc.
Sklar Des. Dev. Labs.
Sterling Prec. Instr.
U. S. Electcl. Motors
WacLine, Inc.
Western Gear Corp.
Westinghouse Electric
Worthington Corp.
Zagora Gears, Inc.

SPEED SYNCHRONIZING INDICATORS

Electric Speed Ind. Co.
Electric Tachometer Corp.
Ess Instr. Co.
GE, Apparatus Sales
Norden-Ketay
Potter Instr. Co.
Probescope Co.
Scherr Co., Inc.
Westberg Mfg. Co.

SPEEDOMETERS, see Speed

SPHEROMETERS

Askania-Werke A. G.
Bronoptics Co.
Central Scientific
Engis Equipt. Co.
Epic, Inc.
Gaertner Scientific
Hall-Barkan Insts.
Helio Instr. Co.
Penn Optical & Instr.
Welch Mfg. Co., W. M.

SPHYGMOMANOMETERS

Cambridge Instr. Co.
G. M. Mfg. Co.
Hellige, Inc.
Instrumentation Assoc.
Medical Electronic Devel.
Precision Therm. & Insts.
Stoelting Co.
Taylor Instr. Cos.

SPIDER SILK

Arachne Laboratory
Central Scientific

SPRING TESTING MACHINES

Ann Arbor Instr. Works
Arlin Products
Baldwin-Lima-Hamilton
Carver, Fred S.
Chatillon & Sons
Detroit Testing Mach.
Dice Co., J. W.
Dillon & Co.
Exact Weight Scale
Federal Products
Gogan Machine Corp.
Gordon Co., Claud S.
Hacker & Co., W. J.
Hunter Spring Co.
Instron Engrg. Corp.
Jensen Tool Co., H. C.
Krouse Testing Mach.
Link Engrg. Co.
Olsen Testing Mach.
Pelouze Mfg. Co.
Riehle Div.
Rockwell Engrg. Co.
Seederer-Kohlbusch
Shepard Labs.
Steel City Testing Mach.
Sturtevant Co.
Testing Machines, Inc.
Toledo Scale
Torrington Mfg. Co.
Worley Jewel Co., John

SPRINGS, Compression and Tension

All-Weather Springs
Associated Spring Corp.
Chatillon & Sons
Cleveland Wire Spring
Crucible Steel
Hunter Spring Co.
Leetronics, Inc.
Lewis Spring & Mfg. Co.
Peck Spring Co.
PIC Design Corp.
Spring Specialty Co.

SPRINGS, Flat

Allied Products Div.
All-Weather Springs
Amer. Laubscher
Associated Spring Corp.
Automatic Electric
Beryllium Corp.
Chatillon & Sons
Cleveland Wire Spring
Crucible Steel
Elgin Nat'l. Watch Co.
Fischer Spring Co.
Grammes & Sons
Hairspring Vibrating
Hunter Spring Co.
Illinois Coil Spring
Instr. Specialties Co.
Leetronics, Inc.
Lewis Spring & Mfg. Co.
Mallory & Co., P. R.
Manross & Sons, Div.
New Haven Clock
Peck Spring Co.
Precision Products
Rapidan Mfg. Co.
Sandsteel Spring Div.
Staver Co., Inc.
Stimpson Co.
Swiss Amer. Jewel-Bear.
Sylvania Elect. Prods.
Tinnerman Products
Vallorbs Jewel Co.
Watch-Motor Mainspring
Wheaton Co.

SPRINGS, Hair and Hair Spring Assemblies

Alina Corp.
Allied Products Div.
Amer. Laubscher Corp.
Asam Mfg. Co.
Associated Spring Corp.
Chatillon & Sons
Elgin Nat'l. Watch Co.
Fischer Spring Co.
Hairspring Vibrating
Howard Clock
Ingersoll-Waterbury
Jadow, Inc.
Jensen Tool Co.
Keller & Co., L. H.
Manross & Sons Div.
Modern Tech. Supply
Newall Mfg. Co.
New Haven Clock
Peck Spring Co.
Prec. Prod. of Waltham
Preco Co.
Sandsteel Spring Div.
Steel Co., Herman D.
Sylvania Elect. Prods.
Thomaston Tool & Die Co.
Vallorbs Jewel Co.

SPRINGS, Helical

All-Weather Springs
Art Wire & Stamping Co.
Associated Spring Corp.
Beryllium Corp.
Chatillon & Sons
Cleveland Wire Spring
Crucible Steel
Eaton Mfg. Co.
Eisler Electric
Fischer Spring Co.
General Plate Div.
Houston Technical Lab.
Hunter Spring Co.
Illinois Coil Spring
Instr. Specialties Co.
Leetronics, Inc.
Lewis Spring & Mfg. Co.
Manross & Sons Div.
Peck Spring Co.
Prec. Products Co.
Preco Co.
Vallorbs Jewel Co.
Wheaton Co.

SPRINGS, Glass

All-Weather Springs
Corning Glass
Fish-Schurman
Fredericks, George E.
Houston, Technical Lab.
Peck Spring Co.
Porter, George K., Inc.
Prec. Glass Prods. Co.

SPRINGS, Torsion

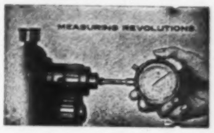
Accurate Spring Mfg.
All-Weather Springs
Associated Spring Corp.
Chatillon & Sons
Cleveland Wire Spring

HASLER SPEED INDICATOR

Chronometric Tachometer with separate reset button for cumulative readings

DURABILITY:
over 30 years

ACCURACY:
¼ of 1% of true speed through life



Type A 0-20,000 r.p.m.
or 0- 6,000 f.p.m.
Type B 0- 2,000 r.p.m.
or 0- 600 f.p.m.

Size
2¾" x ⅞" x 4"
Spindle incl.
Weight 7¾ oz.
ready for test

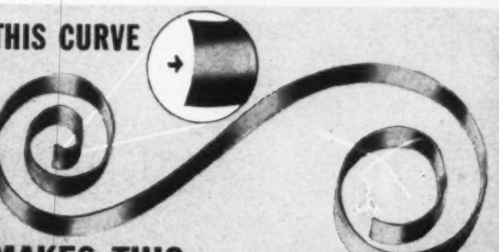
Shipment within 5 days from stock

Sales and Service by

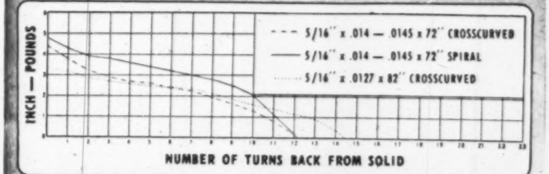
HASLER—TEL CO., INC.
28 Vesey Street, New York 7, N. Y.
U.S. Distributors for Hasler Speed Indicators since 1919

For more information circle 319 on inquiry card.

THIS CURVE



MAKES THIS
SANDSTEEL SPRING
PERFORMANCE CURVE POSSIBLE



Crosscurving is an exclusive Sandsteel spring-making process which gives a longer, more even release of energy. Makes possible the use of longer, thinner springs for more consistent power.

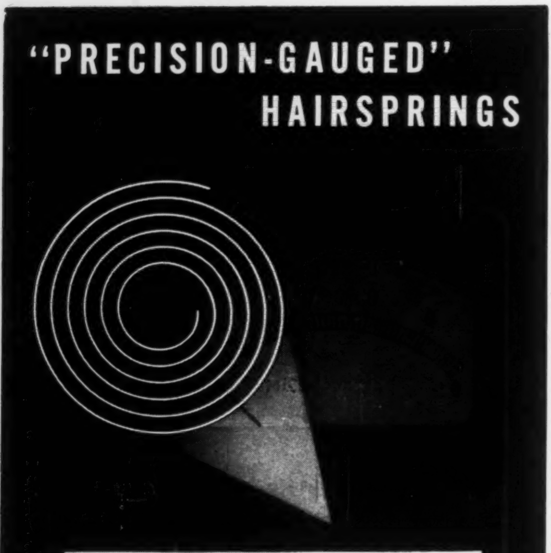
The spring is given a convex structure along the length of the strip and a concave curve across the width. Wound against both curves, the spring delivers dual power.

Write for Free literature ("Springs For Your Product") and Case File.

SS-130

SANDVIK STEEL, INC.
SANDSTEEL SPRING DIVISION
Fair Lawn, New Jersey
Tel. Fair Lawn 4-6200
In New York, Algonquin 5-2200

For more information circle 320 on inquiry card.



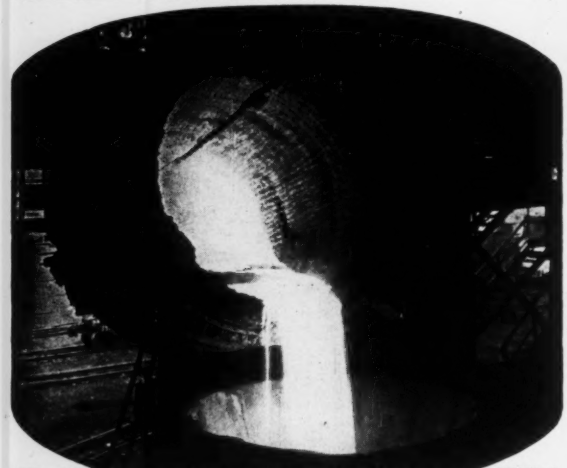
"PRECISION-GAUGED" HAIRSPRINGS

More than 20 years' experience making all types of hairsprings for critical instrument applications.

High volume production with absolute uniformity

PRECISION PRODUCTS COMPANY INC
OF WALTHAM
WALTHAM 54, MASSACHUSETTS

For more information circle **321** on inquiry card.



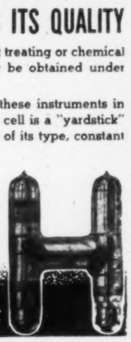
ACCURACY OF TEMPERATURE CONTROL DETERMINES ITS QUALITY

ACCURATE control of temperature or pH is vital to modern heat treating or chemical processing, because only in this way can uniform quality be obtained under mass production conditions.

Potentiometers have made such control possible, and "the heart" of these instruments in most cases, for over 25 years, has been the Eplab Standard Cell. This cell is a "yardstick" for the translation of voltage to temperature. The first commercial cell of its type, constant research has made it "as standard as sterling".

When you buy potentiometers, specify Eplab Standard Cells.

THE EPPLEY LABORATORY, INC.
SCIENTIFIC INSTRUMENTS
3 Sheffield Ave., Newport, R.I., U.S.A.



EPLAB Standard Cells *for Potentiometric Instruments "As Standard as Sterling"*

For more information circle **322** on inquiry card.

Crucible Steel
Fischer Spring Co.
Goodrich Co., B. F.
Hunter Spring Co.
Illinois Coil Spring
Instrument Specialties
Leetronics, Inc.
Lewis Spring & Mfg. Co.
Manross & Sons Div.
Peck Spring Co.
Thomaston Tool & Die Co.
Wheaton Co.

SPRINGS, Watch

Allied Products Div.
Associated Spring Corp.
Elgin Natl. Watch
Hairspring Vibrating
Jadow Inc., B.
Kastner, Charles
Manross & Sons Div.
Marshall Co., C. & E.
Modern Tech. Supply
Newall Mfg. Co.
New Britain Spring
New Haven Clock
Precision Products Co.
Preco Co.
Sandsteel Spring Div.
Sickles & Sons
Steel Co., Herman D.
Thomaston Tool & Die Co.
Watch-Motor Mainspring

SQUARE WAVE GENERATORS, see Generators

STAMPINGS, Fibre and Laminated Phenolic

Aerolite Electronics
Aero Supply Mfg. Co.
Allied Engraving
Auburn Mfg. Co.
Biggs Co., Carl H.
Cambridge Thermionic
Continental-Diamond Fibre
Dittmore & Freimuth
Dynakon Corp.
Eby, Inc., Hugh H.
Electro Devices Inc.
Erie Resistor
Federal Screw Prods.
Federal Tools
Felt Products Mfg.
Formica Co.
GE
Geophysical Instr. Co.
Grammes & Sons, Inc.
Indust. Hrdw. Mfg. Co.
Instrument Tool & Engrg.
Insulation Mfrs. Corp.
Insuline Corp. of Amer.
Kulka Elect. Mfg. Co.
Mayer Co., Geo. J.
Mica Insulator
Miller Dial & Name Pl.
Moss & Co., Henry
National Tel-Tronics
Printloid, Inc.
Rapidan Mfg. Co.
Reisner Mfg. Co.
Richardson Co.
Rogan Bros.
Spaulding Fibre Co.
Stafford Co.
Staver Co., Inc.
Switchcraft, Inc.
Synthane Corp.
Tungsten Contact Mfg
Whitehead Stamping
Wilmington Fibre

STAMPS, Kovar

Fed. Telephone & Radio
Federal Tools
Hermaseal Co.
Hermetic Sealed Prods.
Hunter Spring Co.
Instrument Tool & Engrg.
Staver Co., Inc.
Stupakoff Div.
Sylvania Elect. Prods.

STANDARD CELLS

Amer. Instr. Co.
Amer. Mach. & Foundry
Arnholt Ceramics
Cambridge Instr. Co.
Central Scientific
Electronic Measurements
Epply Lab.
GE
Gray Instr. Co.
Hastings-Raydist
Leeds & Northrup
Muirhead Instrument
Phoenix Prec. Instr.
Rubicon Co.
Sensitive Res. Instr.
Thwing-Albert
Weston Electcl. Instr.

STANDARDS, Acoustic

Massa Labs.

STANDARDS, Capacitance

Aerovox Corp.
Boonton Electronics
Brown Electro-Measmt.
Cambridge Instr. Co.
Electro-Measurements
Federal Telephone & Radio
General Radio Co.
Industrial Instruments
Julie Res. Labs
Leeds & Northrup
MacLeod & Hanopol
Muirhead Instrument
Pacific Instruments
Rubicon Co.
Scientific Specialties
Shallcross Mfg. Co.
Simmonds Aerocessories
Solar Mfg. Corp.
United Condenser

STANDARDS, Color

E & S Optical
Fish-Schurman
Gardner Lab.
Hellige, Inc.
Hickok Elec. Instr.
Koehler Instr. Co.
LaMotte Chem. Prod.
Munsell Color Co.
Phoenix Prec. Instr
Prec. Glass Prods. Co.
Tarc Electronics Inc.
Taylor & Co., W. A.
Weston Electcl. Instr.

STANDARDS, Emf, see Standard Cells

STANDARDS, Frequency (see also Forks, Tuning)

ARF Products
Aero Instrument
Amer. Instr. Co.
Amer. Time Prods.
Berkeley Div.
Bliley Electric
Boonton Radio Corp.
Browning Labs.
Central Scientific
Collins Radio Co.
Columbus Products
Crystal Research Labs.
D & R Ltd.
De Mornay-Bonardi
Doolittle Radio
Dynapar Corp.
El Mec Labs.
Electronic Devel. Lab.
Espey Mfg.
Federal Telephone & Radio
Feiler Engrg. Co.
Ferris Instr. Co.
Freed Transformer
GE, Apparatus Sales
GE, Telechron Dept.
General Radio Co.
Gertsch Products
Hamilton Watch
Hathaway Instr. Co.
Hewlett-Packard
Hickok Electcl. Instr.
Howell Instr. Co.
Hupp Instrumation
Hycon Eastern
Indust. Test Equipt.
Inst. Corp. of Fla.
Jacobs Instruments
Kearfott Co.
Kinetic Instr. Co.
Knights Co.
Lavoie Labs.
Lampkin Labs.
MacLeod & Hanopol
Manson Labs.
Marconi Instruments
Maxson Instr. Div.
Measurements Corp.
Millen Mfg. Co.
Narda Corp.
National Co.
New London Instr. Co.
Panoramic Radio Prods
Philamon Labs.
Polytechnic Res. & Devel.
Potter Instr. Co.
RCA Div.
Radioactive Prods., Inc.
Radio City Prods.
Radio Frequency Labs.
Riverbank Labs.
Servo Corp. of Amer.
Sherron Metallic
Slaughter Co.
Standard Elect. Time
Std. Electronic Res.
Stewart Instr. Co.
Sunshine Scientific
Systron Corp.
Teletronics Lab., Inc.
Times Facsimile Corp.
Varo Mfg. Co.
Vectron, Inc.
Walkirt Co.
Westport Electric

STANDARDS, Gamma-Ray, see Standards, Radioactivity

STANDARDS, Inductance

Aerovox Corp.
Boonton Radio Corp.
Cambridge Instr. Co.
Communication Access.
Dietz Design & Mfg.
Electro-Measurements
Freed Transformer
General Radio Co.
Leeds & Northrup
Pacific Instr. Co
Rubicon Co.
Scherr Co., Inc.
Shallcross Mfg. Co.
Teletronics Lab.
United Transformer Corp.

STANDARDS, Length

Acme Industrial
Brown & Sharpe
Engis Equipt. Co.
Gaertner Scientific
Griswold Mfg. Co.
Gurley, W. & L. E.
Pratt & Whitney
Renick Co., L. C.
Scherr Co., Inc.
Sheffield Corp.
Size Control Co.
Starrett Co.
Swedish Gage
Van Keuren Co.
Webber Gage

STANDARDS, Mass

Gurley, W. & L. E.
Seederer-Kohlbusch

STANDARDS, Pressure

Coleman Instr. Co.
Consol. Electrodynamics
Green, Henry J.
Ideal-Aerosmith
Meriam Instr. Co.
Minneapolis-Honeywell, Boston Div.
Morehouse Machine Co.
Prec. Thermom. & Insts.
Ruska Instr. Corp.
Scientific Instr. Co.
Wallace & Tiernan
Weksler Thermometer

STANDARDS, Radioactivity

Alpine Labs. Ltd.
Anton Electronic Labs.
Atomic Instr. Co.
Bio-Rad Labs.
Can. Radium & Uranium
El-Tronics, Inc.
Jordan Electronics
Landsverk Electrometer
Menlo Res. Lab.
Nuclear-Chicago
Nuclear Measmts. Corp.
Nucleonic Corp. of Amer.
Pacific Transducer
Technical Associates
Tracerlab
Universal Atomics
U. S. Radium Corp.
Western Radiation

STANDARDS, Resistance

Acton Labs.
Aerovox Corp.
Arnhold Ceramics
Associated Research
Beck Bros.
Cambridge Instr. Co.
Cutler-Hammer
Daven Co.
Eastern Prec. Resistor
Electro-Measurements
Electro-Mec Lab.
Federal Instr. Co.
Federal Telephone & Radio
General Radio Co.
Gray Instr. Co.
Julie Res. Labs.
Leeds & Northrup
Physics Res. Labs.
Pimex, Inc.
Rubicon Co.
Sensitive Res. Instr.
Shallcross Mfg. Co.
Tech Labs., Inc.

STANDARDS, Shunt

Associated Research
Burlington Instr. Co.
Cambridge Instr. Co.
Davenport Mfg.
DeJur-Amsco
Electronic Devel. Lab.
GE
Gray Instr. Co.
Hickok Electcl. Instr.
Instrument Resistors Co
Internat. Resistance
Lewis Engrg. Co.
Physics Research
Roller-Smith
Rubicon Co.
Sensitive Res. Instr.
Shallcross Mfg.
Sittler Corp.
Triplett Electcl. Instr.
United Optical
Westinghouse Electric
Weston Electcl Instr.
Winslow Co.

STANDARDS, Sound Level

Audio Instrument Co.
Daven Co.
Dyna Labs.
General Radio
Kay Electric
Massa Lab.

STANDARDS, Surface Roughness and/or Finish

Acme Industrial Co.
Baird-Atomic
Blake Co., Edward
Brush Electronics
Bushnell Co., D. P.
Compar Instr. Co.
DoAll Co.
Engis Equipt. Co.
Gar Prec. Parts, Inc.
GE, Apparatus Sales
Link Engrg. & Mfg.
Micrometrical Mfg.
Opplem Co.
Palos Optical Co.
Penn Optical & Instr.
Pipe Machinery Co.
Scherr Co., Inc.
Size Control Co.
Surface Checking Gage
Webber Gage
Ziess, Inc., Carl

STANDARDS, Temperature

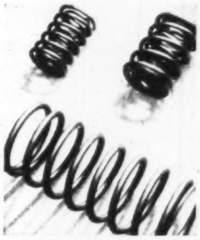
Barnes Engrg. Co.
Ever Ready Thermometer
Green, Henry J.
H-B Instrument
Harco Laboratories
Leeds & Northrup
Lewis Engrg.
L & O Research
Moeller Instr. Co.
Palmer Thermometers
Precision Therm.
Revere Co.
Scientific Instr. Co.
Servo Corp of Amer.
Teichert Engrg. Co.
Trerice Co., H. O.
Weksler Thermom. Corp.
Weston Electcl. Instr.

STANDARDS, Time

Amer. Instr. Co.
Amer. Time Prods.
Berkeley Div.
Dynapar Corp.
Federal Telephone & Radio
Gaertner Scientific
General Radio Co.

All-Inclusive Spring Service

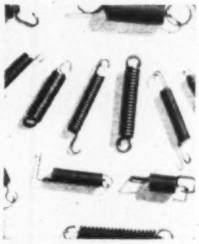
COMPRESSION SPRINGS
Special Shapes
Variable pitch



COMPRESSION SPRINGS
Regular, Double

The capacity of ASC springmaking minds and machines is unlimited. Put this valuable experience to work on your springs, wire forms, small stampings, in a wide variety of metals. ASC Divisions are located to serve major industrial areas in the United States and Canada (see list below). Contact the nearest Division or sales office for design help, quotations or experimental work. Write for free technical information on any specific problem.

VOLUTE SPRINGS
Coned end



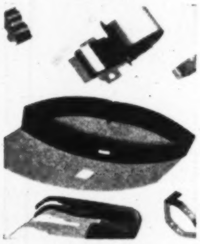
EXTENSION SPRINGS
Special Hooks
and Loops

EXTENSION SPRINGS
Swivel End
Drawbar

TORSION SPRINGS
Single, double
Edge wound

POWER SPRINGS
Clock or Motor

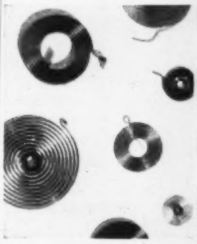
DESIGN



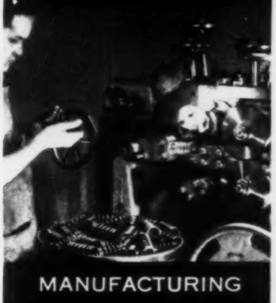
FLAT SPRINGS
Arched, Curved-beam
Elliptical

CLIPS, CLAMPS
and COLLARS

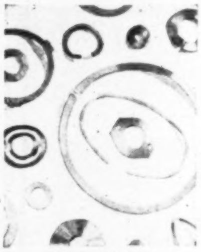
FASTENERS and
RETAINERS



HAIRSPRINGS
for Instruments
Gauges, etc.



MANUFACTURING

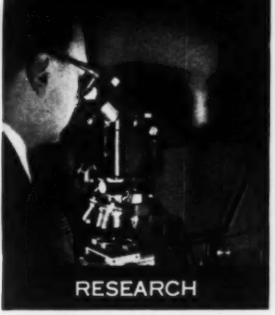


SPRING WASHERS
Wavy, Star, Finger,
Expander, etc.

BELLEVILLE SPRINGS
In Series, Parallel
Parallel-series

DIAPHRAGMS
Discs, Plates

PLUS
COLD-ROLLED
SPECIALTY STEEL



RESEARCH

ASSOCIATED SPRING CORPORATION

General Offices: Bristol, Connecticut

Precision Mechanical Springs, Wire Forms, Small Stampings, Cold-Rolled Specialty Steels

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Syracuse 9 (Solvay), N.Y.

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Corry, Pennsylvania

OHIO DIVISION
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BARNES-GIBSON-RAYMOND DIVISION
40300 Plymouth Rd., Plymouth, Mich.
and Ann Arbor, Michigan

SEABOARD PACIFIC DIVISION
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MILWAUKEE DIVISION
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DUNBAR BROTHERS CO.
Bristol, Connecticut

F. N. MANROSS AND SONS CO.
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LOUISVILLE SALES OFFICE
512 West Ormsby St., Louisville, Ky.

WALLACE BARNES STEEL DIVISION—Producer of Cold-Rolled Specialty Steel

Canadian Subsidiary, THE WALLACE BARNES CO., LTD. Hamilton, Ontario and Montreal, Quebec

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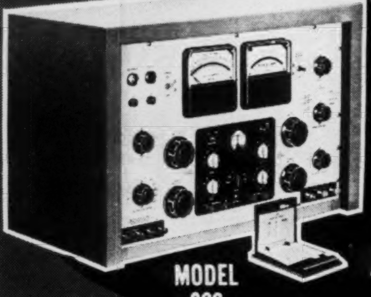
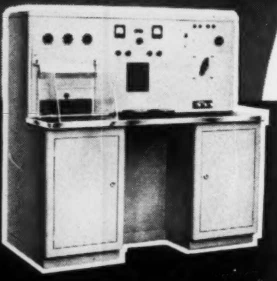
For more information circle **323** on inquiry card.

from
Instrument Calibration HEADQUARTERS



a modern method of maintaining ACCURACY



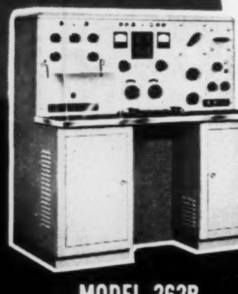
Superior and sustained quality control, through frequent calibration of test instruments, can be achieved by semi-skilled personnel using these self-contained standards.

Portable Model 829 calibrates both AC and DC meters over ranges from 0.25 millivolt to 2000 volts and 2 microamperes to 20 amperes. Direct reading accuracy of 1% (0.5% using charts supplied). Output frequency from 50 to 400 cps depending on line frequency used.

Net price $2,650.

Console Model 261B calibrates all types of AC meters to direct reading accuracies of 0.5% (0.25% using calibration charts) over frequency range of 50 to 1600 cps. Current range from 1.5 milliamperes to 200 amperes; voltage range from 75 millivolts to 1500 volts. Output of electronic power oscillator has less than 5% total harmonic content at 60 cycles.

Net price $9,250.



Model 262B Dual Potentiometer Standard calibrates DC electrical measuring instruments to direct reading accuracies of 0.1% (0.05% using calibration charts) through voltages ranging from 1 millivolt to 1500 volts and currents ranging from 1 microampere to 150 amperes. Employs Weston instruments and standard cells.

Net price $15,600.

Prices are f.o.b. Boonton, N.J. & subject to change without notice.

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Technical and application data for our six basic models are fully described in a new 24-page catalog. Send for it today.

RFL
Radio Frequency
LABORATORIES, INC.
Boonton, New Jersey, U.S.A.

For more information circle **324** on inquiry card.

Hamilton Watch
Hubb Instrumation
Jacobs Instr. Co.
Lavoie Labs.
Moeller Instr. Co.
National Co.
Parsons Co., Ralph M.
Potter Instrument
Riverbank Labs.
Rutherford Electronic
Standard Elect. Time Co.
Std. Electronic Res.
Stewart Instr. Co.
Stoelting Co.
Systron Corp.
Varo Mfg. Co.
Vectron, Inc.

STANDARDS, Volume

Gurley, W. & L. E.
Kontes Glass
Ruska Instr. Corp.

STARTERS, Motor

Allen-Bradley
American-Kloeckner
B/W Controller Co.
Bendix Aviation Corp.
Clark Controller Co.
Cutler-Hammer
Cyclohm Div.
Essex Wire Corp.
Furnas Electric
GE, Apparatus Sales
Gates Electronic Co.
Ingersoll-Rand
Minneapolis-Honeywell
Monitor Controller Co.
Perkin Engrg. Co.
Raytheon Mfg. Co.
Schauer Mfg. Co.
Small Motors, Inc.
Square D Co.
Synchro-Start
Westinghouse Electric

STATIC ELECTRICITY GENERATORS

Electric Regulator Corp.

STATIC ELIMINATORS

C. G. S. Labs.
Can. Rad. & Uranium
Hewson Co., Inc.
Hoover Electronics Co.
Nuclear Corp. of Amer.
Robins Industrial Corp.
Sela Electronics Co.
Sticht Co., Herman H.
Superex Electronics
Taller & Cooper
Transval Engrg. Corp.
U. S. Radium Corp.

STATION CONTROL EQUIPMENT, see Electric Power Generation Instruments, also Gas Distribution System Instruments

STEAM GOVERNORS, see Boiler Room Instruments

STEAM METERS, see Flowmeters, Inferential Type

STEAM SPECIALTIES, see Boiler Room Instruments

STEEL TAPES, see Tapes, Steel

STELLAR SPECTROSCOPES, see Spectroscopes, Stellar

STEREOSCOPES

Abrams Instr. Co.
Amer. Optical
Avion Div.
Bronoptics Co.
DoAll Co.
Edmund Scientific
Ercona Corp.
Fairchild Reconnaissance
Fuess, Inc.
General Biological
Gordon Enterprises
Hacker & Co., W. J.
Meyer Opticraft
Opplem Co.
QOS Corp.
Stratex Instr. Co.
Wild Heerbrugg
Zeiss, Inc., Carl

STEREOSCOPES, X-ray

Abrams Instr. Co.
Bar-Ray Products
Bausch & Lomb
Fairchild Reconnaissance
GE, X-Ray Dept.
Gordon Enterprises
Kelley-Koett Mfg. Co.
North Amer. Philips
Picker X-Ray
Tracerlab, Inc.
Westinghouse X-Ray Co.

STETHOSCOPES, Engineers

Anco Instr. Div.
Brush Electronics
Engineers Res. & Devel.
Fairchild Camera
Feiler Engrg. & Mfg. Co.
Gilmore, E. R.
Western Gear Corp.
Zeiss Inc., Carl

STIFFNESS TESTERS, Paper, see Paper Testing

STILLS, Water (see also Distillation)

Aetna Scientific
Andrew Techn. Supply
Barnstead Still
Central Scientific
Electric Hotpack Co.
Fish-Schurman
General Scientific Equipt.
Greiner, Emil
Labline, Inc.
Penfield Mfg. Co.
Specialty Glass Co.
Stokes Mach. Co., F. J.
Selas Corp. of Amer.
Precision Scientific
Thomas Co., Arthur H.
Weber Bros. Metal Works

STIRRERS, Laboratory, Variable Speed

Ace Glass
Alcoe Co., A. S.
Amer. Instr. Co.
Andrew Techn. Supply
Brookfield Engrg. Labs.
Central Scientific
Chicago Surgical & Elect.
Eastern Engrg. Co.
Eberbach Corp.
Eberbach & Son
Fish-Schurman
Fisher-Scientific
Greiner Co., Emil
Heller Co., G. K.
Humboldt Mfg. Co.
Kontes Glass
Koehler Instr. Co.
La Pine & Co., A. S.
Labline, Inc.
Martin & Co.
Micro-Metric Instr.
Mixing Equipt. Co.
Omega Machine
Palo Lab. Supplies
Palo-Myres Inc.
Phipps & Bird
Precision Scientific
Refinery Supply Co.
Research Appliance Co.
Sargent & Co., E. H.
Sorvall, Inc., Ivan
Talboys Instr. Corp.
Technical Products
Temperature Engrg.
U. S. Gasket Co.
Welch Mfg. Co., W. M.
Western Electric
Wilkens-Anderson
Williams Apparatus, Inc.

STOP WATCHES, see Watches, Stop

STRAIGHT EDGES

Acme Industrial
Alteneder & Sons, Theo.
Amer. Measg. Instr.
Brown & Sharpe
Bruning Co., Inc.
Collins Microflat Co.
Dietzgen Co.
DoAll Co.
Gray Instr. Co.
Griswold Mfg. Co.
Hays Corp.
Keuffel & Esser
Lufkin Rule Co.
Negus, T. S. & J. D.
Post Co., Frederick
Scherr Co., Inc.
Speidel & Co.
Starrett Co.
Swedish Gage
Taft-Pierce Mfg. Co.
Warren-Knight
Webber Gage
Weber Co., F.
White Co., David

STRAIGHTENING VANES

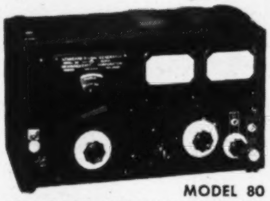
Amer. Meter Co.
Bailey Meter Co.
Bristol Co.
Builders-Providence
Daniel Orifice Fitting
Foxboro Co.
Hays Corp.
Meriam Instr. Co.
Penn Insts. Div.
Republic Flow Meters
Robinson Orifice Fitting
Simplex Valve & Meter
Taylor Instr. Cos.

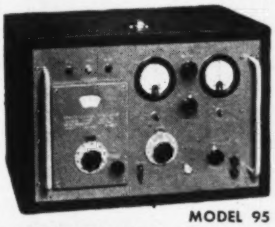
STRAIN GAGES, including Bonded and Unbonded Resistance Type (see also Stress, also Polariscopes)

Acme Industrial
Allegany Instr. Co.
Amer. Instr. Co.
Anderson, Arthur R.
Ann Arbor Instr. Works
Bailey Meter Co.
Baldwin-Lima-Hamilton
Bendix-Pacific
Bristol Co.
Chatillon & Sons
Computer Instr. Corp.
Control Devices Inc.
DuMont Labs., Allen B.
Dynamic Instr. Co.
Edin Electronics
Eltzen Co., Louis C.
Ellis Associates
Endevco Corp.
Federal Products Corp.
Fielden Instr. Div.
Gaydon Co.
GE, Apparatus Sales
Giannini & Co.
Gilmore Industries
Greenleaf Mfg. Co.
Hamilton Watch
Hathaway Instr. Co.
Hays Corp.
Heiland Div.
Industrial Electronics, Inc.
Metzger & Son

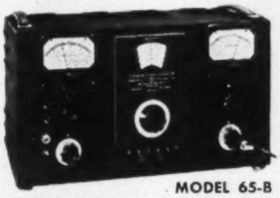
MEASUREMENTS CORPORATION

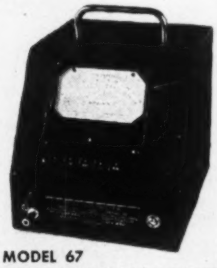
Laboratory Standards


MODEL 80
STANDARD SIGNAL GENERATOR


MODEL 95
FM STANDARD SIGNAL GENERATOR

MODEL 210 SERIES
FM STANDARD SIGNAL GENERATOR


MODEL 65-B
STANDARD SIGNAL GENERATOR


MODEL 67
PEAK-TO-PEAK VOLTMETER

STANDARD SIGNAL GENERATORS

MODEL	FREQUENCY RANGE
65-B	75 Kc to 30 Mc
80	2 Mc to 400 Mc
80-R	5 Mc to 475 Mc
82	20 Cycles to 200 Kc 80 Kc to 50 Mc
84-R	300 Mc to 1000 Mc
84-TVR	400 Mc to 1000 Mc
95	50 Mc to 400 Mc
210-Series	25 Mc to 200 Mc

SQUARE WAVE GENERATORS

MODEL	FREQUENCY RANGE
71	6 to 100,000 Cycles
72	5 Cycles to 5 Mc

PULSE GENERATOR

MODEL	FREQUENCY RANGE
79-B	60 to 100,000 pulses per second

VHF FIELD STRENGTH METER

MODEL	FREQUENCY RANGE
58-AS	15 Mc to 150 Mc

HIGH FREQUENCY BARRETTER

MODEL	FREQUENCY RANGE
202-C	2 Mc to 1000 Mc

VACUUM TUBE VOLTMETERS

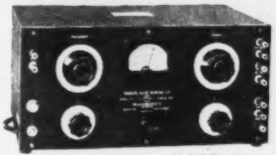
MODEL	FREQUENCY RANGE
62	30 cps to over 150 Mc
67	5 to 100,000 sine-wave cps.

MEGACYCLE "GRID-DIP" METERS

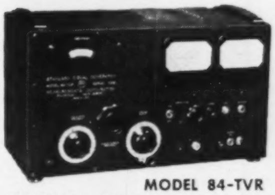
MODEL	FREQUENCY RANGE
59 LF	0.1 Mc to 4.5 Mc
59	2.2 Mc to 420 Mc
59 UHF	420 Mc to 940 Mc

CRYSTAL CALIBRATORS

MODEL	FREQUENCY RANGE
111	250 Kc to 1000 Mc
111-B	100 Kc to 1000 Mc


MODEL 71
SQUARE WAVE GENERATOR

MODEL 72
SQUARE WAVE GENERATOR

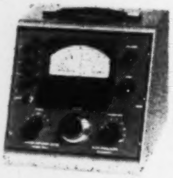
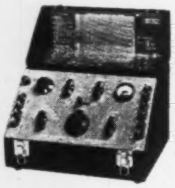

MODEL 84-TVR
STANDARD SIGNAL GENERATOR

MODEL 59
MEGACYCLE "GRID-DIP" METER

MODEL 111
CRYSTAL CALIBRATOR

MEASUREMENTS CORPORATION
BOONTON NEW JERSEY

For more information circle **325** on inquiry card.

Strain Gage Instrumentation

BAM-1
Bridge Amplifier and Meter
Very convenient general purpose box. Static readings on meter. Dynamic readings on dc 'scope. Transistor dc amplifier with excellent low noise and drift. **Bulletin #6.**

BA-12
Bridge Amplifier
Accurate monitoring of fatigue tests. "Dynamic Null Balance" gives accuracy within 1% on steady dynamic signals. Used with any cathode-ray oscilloscope. **Bulletin #5.**

B-1 Bridge
Bridge box for powering and calibrating all configurations of SR-4 type strain gages drives 10 millivolt sensitivity recorders such as strip chart, dial indicators and sensitive cathode-ray oscilloscopes. The B-1 supplies DC to the strain gage bridge. It is powered from 115V 60 cycle line and gives stable and dependable operation from DC to 50,000 cps. **Bulletin #13.**

Switch and Balance Units, Strain Gage Kit
ELLIS ASSOCIATES
Box 77 **Pelham, New York**

For more information circle **326** on inquiry card.

Miller Corp., Wm.
Olsen Testing Machine
Phoenix Prec. Inst.
Pratt & Whitney
Reed Research
Revere Corp.
Riehle Div.
Sciaky Bros., Inc.
Scientific Enterprises
Sheffield Corp.
Size Control Co.
Spivey, Inc., James
Starrett Co.
Statham Labs.
Swedish Gage
Taller & Cooper, Inc.
Technograph Printed Elect.
Testing Machines, Inc.
Thwing-Albert
Trans-Sonic, Inc.

STRAIN-RATE and STRESS-RATE CONTROLLERS

Amer. Electronic Mfg.
Bailey Meter Co.
Barber-Colman
Berkeley Div.
Bristol Co.
Bush Assoc., G. F.
Chatillon & Sons
Clevite-Brush
Fielden Instr. Div.
Gilmore Industries
Hathaway Instr. Co.
Industrial Control Co.
Industrial Electronics
Phoenix Prec. Instr.
Robertshaw-Fulton
Thwing-Albert

STRAIN TESTERS, Glass, see Glass Test Instruments

STRAIN-TIME RECORDERS

Allegany Instr. Co.
Bailey Meter Co.
Baldwin-Lima-Hamilton
Bristol Co.
Brush Electronics
Cambridge Instr. Co.
Consol. Electrodynamics
Consolidated Avionics
Cook Electric
Ellis Associates
Fielden Instr. Div.
Foxboro Co.
Geotechnical Corp.
Gilmore Industries
Hamilton Watch Co.
Hathaway Instr. Co.
Heiland Div.
Helipot Div.
Industrial Electronics
Keuffel & Esser

Non-Linear Systems
Opplem Co.
Phoenix Prec. Instr.
Radiation, Inc.
Ruge Assocs.
Telecomputing Corp.
Thwing-Albert

STRAINERS, Fabricated Wire Cloth

Air-Maze Corp.
Baker & Co.
Keckley Co., O. C.
Newark Wire Cloth Co.

STRAINERS, Pipeline

Airmatic Valve
Anderson Co., V. D.
Automatic Switch
Black, Sivalls & Bryson
Cash Co., A. W.
Cash Valve Mfg. Corp.
Cooper Co., Clark
Corning Glass Works
Davis Regulator Co.
DeZurick Shower Co.
Edward Valves, Inc.
Fisher Governor
General Controls
Hays Mfg. Co.
Henry Valve Co.
Jordan Corp.
Kaye & MacDonald
Keckley Co., O. C.
Kieley & Mueller
Klipfil Valves, Inc.
Leslie Co.
Marsh Corp., Jas. P.
Mason-Neilan Div.
McAlear Mfg. Co.
Mueller Co.
Newark Wire Cloth Co.
Nicholson & Co., W. H.
Rockwell Mfg. Co.
Rockwood Sprinkler
Sarco Co.
Schade Valve Mfg. Co.
Schutte & Koerting
Smith Co., S. Morgan
Spence Engrg. Co.
Squires Co., C. E.
Trerice Co.
Warren Engrg. Co.
Watts Regul. Co.

STREAM GAGING INSTRUMENTS, see Hydrologic Instruments

STRESS INDICATORS

Allied Products Div.
Ames Co., B. C.
Bailey Meter Co.
Baldwin-Lima-Hamilton
Brush Electronics
Cambridge Instr. Co.
Chatillon & Sons
Crescent Engrg. & Res.
Daytronic Corp.
DuMont Labs., Allen B.
Ellis Associates
Emery Co., A. H.
Federal Products
GE
Gilmore Industries
Hathaway Instr. Co.
Heiland Div.
Industrial Electronics, Inc.
Kushner, Joseph B.
Lessells & Assocs.
Magnaflux Corp.
Metzger & Son
Metron Instr. Co.
Minn-Honeywell, Boston
Minnesota Electronics
National Instr. Co.
Owen Labs., Inc.
Polyphase Instr. Co.
Riehle Div.
Ruge Assocs.
Shasta Div.
Statham Labs.
Swedish Gage

STRESS-STRAIN ANALYZERS

Allegany Instr. Co.
Allied Products Div.
Consol. Electrodynamics
Eitzen Co., Louis C.
Electronic Control Sys.
Electronic Tube Corp.
Ellis Associates
Franklin Electronics
Furst Electronics
Hathaway Instr. Co.
Moseley Co.
National Instr. Co.
Performance Measmts. Corp.
Polyphase Instr. Co.
Westronics, Inc.

STRESS-STRAIN INDICATORS and/or RECORDERS

Ace Electronics
Allegany Instr. Co.
Allied Products Div.
American Hydromath
Ames Co., B. C
Anderson, Arthur R.
Ann Arbor Instr. Wks.
Bailey Meter Co.,
Baldwin-Lima-Hamilton
Barnes Development
Beckman Instruments
Bristol Co.
Brookfield Engrg. Labs.
Brush Electronics
Cambridge Instr. Co.
Century Geophysical
Chatillon & Sons
Consolidated Avionics
Consol. Electrodynamics
Cook Electric
Crescent Engrg. & Res.
Daytronic Corp.
Dillon & Co.
Eitzen Co., Louis C.
Electro Products Labs.
Electronic Tube Corp.
Ellis Associates
Emery Co., A. H.
Franklin Electronics
Furst Electronics
GE
Gilmore Industries
Greenleaf Mfg. Co.
Hathaway Instr. Co.
Heiland Div.
Helipot Div.
Industrial Electronics
Kybernetes Corp.
Leeds & Northrup
Librascope, Burbank Div.
Magnaflux Corp.
Metron Instruments
Metzger & Son
Minn-Honeywell, Boston
Mosley, Francis L.
National Instr. Co.
Non-Linear Systems
Nosker Engrg. Prods.
Offner Electronics
Olsen Testing Machines
Polyphase Instr. Co.
Riehle Div.
Ruge Assocs.
Sanborn Co.
Scientific Enterprises
Scott Testers, Inc.
Sheffield Corp.
Statham Labs.
Streeter-Amet
Swedish Gage
Taller & Cooper
Task Corp.
Testing Machines, Inc.
Thwing-Albert
Trimount Instr. Co.

STRIP, Aluminum, see Sheets, Aluminum

STRIP, Beryllium Copper, see Sheets, Beryllium Copper

STRIP, Stainless Steel

Allegany Ludlum Steel
Amer. Silver Co.
Armco Steel Corp.
Carpenter Steel Co.
Crucible Steel of Amer.
Davenport Mfg. Co.
Disston & Sons, Inc.
Driver Co., Wilbur B.
Driver-Harris
Ferner Co.
Fischer & Porter Co.
Hubbell Metals
Jessop Steel Co.
Metal Goods Corp.
Michigan Steel Cast. Co.
Schnitzer Alloy Prods.
Simonds Saw & Steel
Universal-Cyclops

STRIP-CHART RECORDERS, see Recorders, also Object of Measurement

STROBOSCOPES

Associated Research
Berkshire Labs.
Biddle Co., Jas. G.
Boulin Instr. Co.
Bronoptics Co.
Commercial Research
Communication Meas. Lab.
Computer Co. of Amer.
Conn, Ltd., C. G
Davenport Mfg.
Dormitzer Elect. & Mfg.
Edgerton, Germeshausen
Electronic Engineers
Electronic Measmts. Co.
Endevco Corp.
Engrg. Res. & Devel.
Epic, Inc.
Fruengel Inc.
General Radio Co.
Hickok Elec. Instr.
Huggins Labs.
Ideal Laboratory Tool
Internat. Res. & Devel.
Kemlite Labs.
Lenox Instrument Co.
Mercury Electronic Co.
Minneapolis-Honeywell
Opad Electric
Slaughter Co.
Sticht Co., Herman H.
Sylvania Elect. Prods.
Wabash Instrs. & Spec.
Welch Mfg. Co., W. M.
Western Gear Corp.
Westinghouse Electric
Zeiss, Inc., Carl

STRUCTURAL SHAPES

American Brass Co.
Breeze Corp.
Centralab Div.
Gervos Instr. Co.
Hubbell Metals
Keystone Carbon Co.

STYLI, Agate Point

Duotone Co.
Keller, Jr., Hugo P.
King Gem Co.
Vallorbs Jewel Co.

STYLI, Sapphire, Recording

Bird & Co.
Duotone Co.
Elgin Natl. Watch
Gatti, Inc., Aurele M.
Impact Register
Keller, Jr., Hugo P.
King Gem Co.
Powers, George
Reeves Soundcraft
Steel Co., Herman D.
Swiss Jewel Co.
Vallorbs Jewel
Worley Jewel Co., John

STYLI, Tungsten, Recording

Alden Systems Co.
Cleveland Tungsten Mfg.
Duotone Co.
Edin Co.
Vallorbs Jewel Co.
Willey's Carbide Tool Co.
Worley Jewel Co.

SULPHUR DIOXIDE INDICATORS, and/or RECORDERS, see Gas Analyzers

SUN COMPASSES, see Compasses, Sun

SUNSHINE INDICATORS and/or RECORDERS

Bendix-Friez
Bristol Co.
Cambridge Instr. Co.
Friez Instr. Div.
GE
G. M. Mfg. Co., Inc.
Instruments Corp.
Leeds & Northrup
Taylor Instr. Co.
Virginia Electronics
White Co., Inc.

SUPERVISORY CONTROL EQUIPMENT and SYSTEMS, see Control Systems, also Telemetering

SUPPORTS, Cable and Tubing, see Tubing Supports

SURFACE FINISH INSTRUMENTS, see Dimensional Gages, Surface

SURFACE FINISH SPECIMENS, see Standards, Surface Finish

SURFACE INDICATORS, see Dimensional Gages, Surface

SURFACE PLATES, Glass

Acme Scientific
Bausch & Lomb
Binswanger & Co.
Bronoptics Co.
Cal-Astro Optical Labs.
Clark & Sons
Collins Microflat Co.
Davidson Mfg.
DoAll Co.
E & S Optical
E & W Optical
Esco Products
Fecker, Inc.
Fish-Schurman
Georator Corp.
Gordon Enterprises
Jones Optical Works
Lab. Optical Co.
Leroy M. E. Clausing
Palos Optical
Regal Instr. Co.
Scherr Co., Inc.
Tinsley Laboratories
Unertl Optical
Zeiss, Inc., Carl
Zenith Optical Lab.

SURFACE PLATES, Stone

Brown & Sharpe
Bryant Chucking Grinder
Collins Microflat Co.
DoAll Co.
E & W Optical
Herman Stone Co.
Scherr Co., Inc.
Size Control Co.
Taft-Pierce

SURFACE TEMPERATURE INSTRUMENTS, see Thermometers, Surface

SURFACE TENSION INSTRUMENTS (see also Balances)

Cambridge Instr. Co.
Central Scientific
Chatillon & Sons
Curtiss-Wright
Kushner Labs., Joseph B
Natl. Instr. Labs.
Thomas Co., Arthur H.

SURVEY FOOT-ODOMETERS, see Odometers

SURVEYING INSTRUMENTS, including Aneroid Type

Abrams Instr. Co.
Ainsworth & Sons
Alpha Instr. Co.
Amer. Paulin System
Askania-Werke A. G.
Beckman Div.
Berger Scient. Supps.
Berger & Sons
Branson Instr. Co.
Bliss & Co.
Bray Optical
Brunning Co., Inc.
Brunson Instr.
Dietzgen Co.
Engis Equipt. Co.
Ercona Corp.
Ferner Co., Inc.
Garlynn Engrg. Co.
Geier & Bluhm
Goldak Co.
Gordon Enterprises
Graf-Apsco
Gurley, W. & L. E.
Hastings-Raydist
Hyde Instr. Co.
Jarrel-Ash
Kenyon Instr. Co.
Keuffel & Esser
Leupold & Stevens
Los Angeles Scient. Instr.
Lufkin Rule Co.
Meyer-Opticraft
Moran Instr. Corp.
NRD Instrument Co.
Nuclear-Chicago
Opplem Co., Inc.
Pittsburgh Instr. & Mach.
Post Co., Frederic
Republic Lens Co.
Shepard Labs.
Speedometer Electric
Speidel & Co.
Sperry-Sun Well Survey
Sprengnether Instr. Co.
Starrett Co.
Stratex Instr. Co.
Suverkrop Instruments
Thermometer Corp.
Ulmer Co., J. C.
United States Blue Print
Wallace & Tiernan
Warren-Knight
Weber & Co.
White Co., Inc.
Wild Heerbrugg
Wood Counter Lab.
Zeiss, Inc., Carl.

SURVEYING INSTRUMENTS, Underground, for wells or bore holes (see also Geophysical Instruments, also Oil Well Instruments)

Anton Electronic Labs.
Berger Scient. Supps.
Berger & Sons
Brunson Instr.
Bruning Co., Inc.
Eastman Oil Well
Engineering Labs., Inc.
Engis Equipt. Co.
Georator Corp.
Gulton Industries
Gurley, W. & L. E.
Graf-Apsco Co.
Halliburton Oil Well
Heiland Div.
Jarrell-Ash
Jordon Electronics
Lenox Instrument Co.
Los Angeles Scient. Instr.
Mt. Sopris Instr. Corp.
Menlo Research Lab.
Radioactive Products
Seismograph Service Corp.
Sperry-Sun Well Surveying
Victoreen Instr. Co.
Warren-Knight
White Co.

SURVEYOR'S CHAINS, see Surveying Instruments

SURVEYORS' FOOT METERS

Graf-Apsco Co.
Speedometer Electric
Wild Heerbrugg

SUSPENSION RIBBON

Baker & Co., Inc.
Cohn Mfg. Co., Sigmund
Manross & Sons, Div.
Miller Corp., William
Precision Products
Secon Metals Corp.

SWITCHBOARDS

Amer. Kloeckner-Moeller
Amer. Mach. & Foundry
Auto. Electric Sales
Cutler-Hammer
Electro Devices (St. Louis)
Fed. Telephone & Radio
General Control Co.
GE, Apparatus Sales
Gustaveson, Inc.
I.T.E. Circuit Breaker
Intelex Systems
Lake Erie Electric
Mullenbach Div.
Nelson Electric Mfg.
North Electric
Northeastern Engrg., Inc.
Panellit, In.c.
Penn Panel & Box Co.
Ram Meter, Inc.
Swam &Co., R. E. S.
Stromberg-Carlson
Std. Elect. Time Co.
Tech. Oil Tool Corp.
U. S. Instr. Corp.
Virginia Electronics
Walker Div.
Webb Co., Jervis B.
Westinghouse Electric

SWITCHES, Air Operated

Aero Instr. Co.
Amer. Kloeckner-Moeller
Automatic Control Co.
Autom. Timing & Controls
Automation Prod. Inc.
Barksdale Valves
Bellows Co.
Black, Sivalls & Bryson
Bristol Co.
Burton Mfg. Co.
CBS-Hytron Div.
Century Electronics & Inst·
Cleveland Fuel Equip.
Climax Div.
Cook Electric
Cooper Co., Clark
Dietz Co., Henry G.
Dwyer Mfg. Co.
Furnas Electric
GE
Gas Appliance Specialties
Giannini & Co., G. M.
Gorn Electric
Hetherington, Inc.
Hobbs, John W.
Johnson Service Co.
Manning, Maxwell & Moore
Mason-Neilan Div.
Meletron Corp.
Mercoid Corp.
Miller-Robinson
Minneapolis-Honeywell
  Indust. Div.
Moore Products
Mu-Switch Corp.
Powers Reg. Co.
Rotron Div.
Seely Instr. Co.
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Shallcross Mfg. Co.
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United Elect. Cont. ·.
U. S. Gauge Div.
Westinghouse Electric
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SWITCHES, Counteractuating

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Autom. Elect. Sales Corp.
Basic Controls, Inc.
Cook Electric
Daystrom Instr. Div.
Dittmore & Freimuth
Electrical Devel.
Electro-Snap Switch
Electro-Tech. Equipt. Co.
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Farmer Electric
General Controls
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Intelex Systems
Jo-Bell Products Div.
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Lumenite Electronic
Maxson Int. Div.
Micro Switch Div.
Post Machinery Co.
Production Instr. Co.
Recora Co.
Ribble Engrg. Co.
Stromberg-Carlson
Unimax Switch Div.

SWITCHES, Instrument, including Wiping, Selecting, etc.

Adams & Westlake
Aerovox Corp.
Allied Control Co., Inc

repeats within .0001"

actuating force .01 gram

no overtravel problem

Frees the designer for new methods and new accuracy. Frictionless. Temperature stable.

Used to gauge, weigh, control, position—wherever a physical displacement takes place. Can be actuated by changes in pressure, flow, dimensions, weight, or force.

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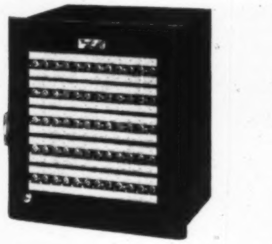
For Thermocouples or Resistance Bulb Circuits



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Carling Electric
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Electro-Miniatures Corp.
Electro Switch Corp.
Electro-Snap Switch
Electro-Tech Equip.
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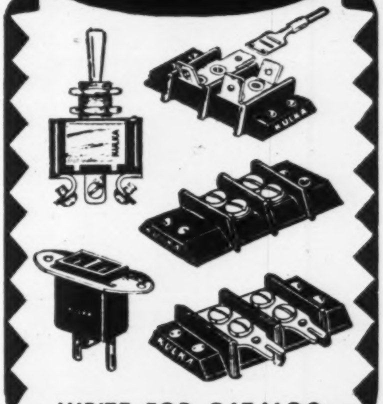

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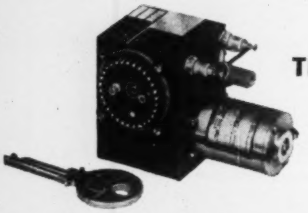

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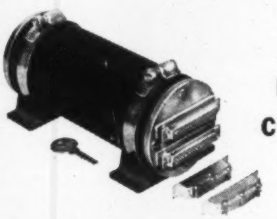

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Type AS: The ASCOP Type AS multi-channel rotary sampling switch is designed specifically for airborne telemetering applications where precision high-speed sampling with the utmost reliability is necessary for accurate data. 3 poles 27 channels @ 2.5, 5 or 10 rps. 27.5 VDC governed drive. Proven reliability in 25,000 hours of life testing.

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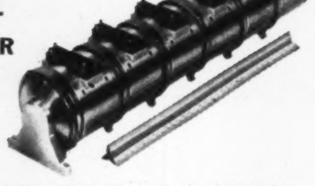

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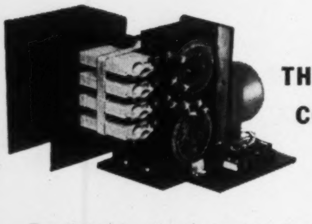

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SWITCHES, Relay, see Relays

SWITCHES, Rotary, including Selector

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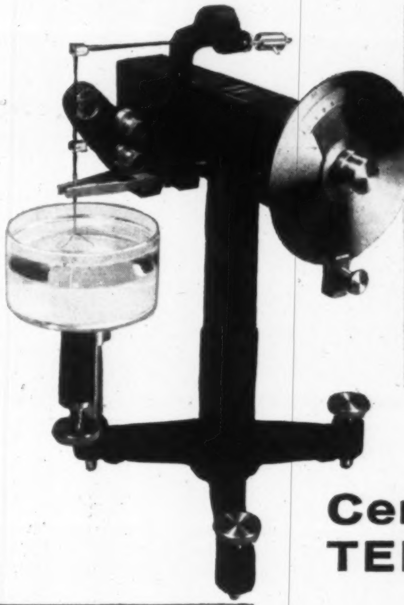
Cook Electric



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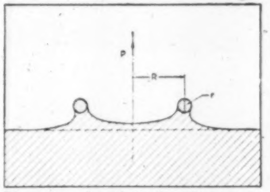
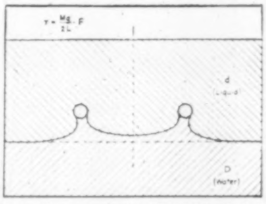


Distention of surface film during surface tension measurement.



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Mason Electric
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SWITCHES, Snap Action

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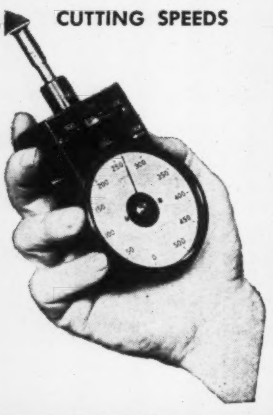

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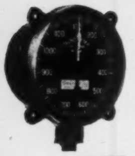
CAT. NO. 2301, 0-10,000 RPM Suitable double
CAT. NO. 2302, 0-1,000 RPM rated speed.
CAT. NO. 2304, 0-100 RPM BULLETIN 735

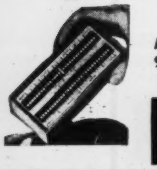
CENTRIFUGAL STATIONARY TACHOMETERS



For permanent mounting on machines. Model J. Sizes 3 in., 4 in., 5½ in., 8 in. and 10 in. dial diameters. Flexible cable driven. Many standard ranges reading RPM, FPM, YPM, etc. BULLETINS 794, 795, 796

VIBRATING REED TACHOMETERS

PORTABLE AND STATIONARY



Measure speed by touch. Many different ranges from 900-100,000 RPM.

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Betts & Betts
Black-Sivalls & Bryson
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Carbon Div.
Carling Electric
Carter Parts Co.
Channer Corp.
Chicago Telephone Sup.
Clark Controller Co.
Clarostat Mfg. Co.
Comar Electric
Control Products
Controls Co. of Amer.
Cook Electric
Cooper Co., Clark
Curtiss-Wright
Cutler-Hammer
Daven Co.
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Electro Switch Corp.
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General Controls Co.
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GE Const. Materials Div.
GE, Gen. Purp. Controls
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Hetherington, Inc.
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J-B-T Insts., Inc.
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Jo-Bell Products
Kulka Electric Mfg.
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Manning, Maxwell & Moore
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Mercoid Corp.
Micro Switch Div.
Miller-Harris Instr.
Minneapolis-Honeywell,
  Indus. Div.
Newark Electric Co.
Perfex Corp.
Phaostron Co.
Pollak Corp., Joseph
Revere Corp.
Sealectric Switch & Relay
Smith, Inc., Herman H.
Spencer Thermostat Div.
Square D Co.
Stackpole Carbon
Tech Labs., Inc.
Telex, E-A Div.
Thermador Electcl. Mfg.
Torsion Balance
Ulanet Co.
Unimax Division
United Electric Controls
Ward Leonard Electric
Wirt Company

SWITCHES, Stepping, including Motors, Step Type (see also Relays)

Amer. Phenolic Corp.
Amglo Corp.
Autom. Electric
Autom. Elect. Sales Corp.
Automatic Control
Barber-Colman
Clare & Co., C. P.
Controls Co. of Amer.
Cook Electric
Cutler-Hammer
Daven Co.
Dietz Co., Henry G.
Electric Switch Corp.
Electro Tec Corp.
Endevco Corp.
Engineered Electronics
Fed. Telephone & Radio
Furnas Electrical
General Control Co.
GE Apparatus Sales
Giannini & Co.
Globe Industries
Guardian Electcl. Mfg. Co.
Haydon Co., A. W.
Hetherington, Inc.
Imtra Corp.
Instr. Dev. Labs.
Intelex Systems
Kellogg Switchboard
Leetronics, Inc.
Leland, Inc.
Lumenite Electronic
Mallory & Co., P. R.
Mason Electric
North Electric
Oak Mfg. Co.
Phaostron Co.
Precision Parts Co.
Recora Co.
Sealectric Switch & Relay
Shallcross Mfg. Co.
Stepper Motors Corp.
U. S. Instr. Corp.

SWITCHES, Thermostatic

Advance Electric
Allen-Bradley
Barber-Colman
Bendix, Friez
Betts & Betts
Bridgeport Thermostat
Bristol Co.
Burling Instr. Co.
Control Products
Controls Co. of Amer.
Cook Electric
Cutler-Hammer
Dickson Co.
Edison, Inc., Thomas A.
Fenwal, Inc.
G-V Controls
General Cement Mfg.
General Controls Co.
GE, Apparatus Sales
Gleason-Avery
Hart Mfg. Co.
Hawk Tool & Engrg. Co.
H-B Instruments Co.
Intercontinental Dynamics
Jaidinger Mfg. Co.
Larson Instr.
Mack Electric Devices
Manning, Maxwell & Moore
Mech. Industs. Prodn. Co.
Mercoid Corp.
Micro Switch Div.
Minitec
Perfex Corp.
Powers Reg. Co.
Prec. Thermom. & Insts.
Reynolds Electric
Scaico Controls
Shallcross Mfg. Co.
Spencer Thermostat Div.
Struthers-Dunn
Thwing-Albert
Tuttle & Kift, Inc.
Ulanet Co.
Unimax Switch Corp.
United Control Corp.
United Electric Controls
United Electronic Controls
Viking Instruments
Ward Leonard Electric
Weston Electcl. Instr.
Wheelco Instr. Div.

SWITCHES, Time

A'G'A Div.
Aemco Inc.
Alina Corp.
Allen-Bradley
Anderson, A. & J. M.
Autocall Co.
Autom. Electric
Autom. Timing & Controls
Automatic Controls
Barber-Colman
Betts & Betts
Bristol Co.
Bristol Motor Div.
Central Scientific
Cincinnati Time Rec.
Clark Controller Co.
Controls Co. of Amer.
Cook Electric
Cramer Controls Corp.
Curtiss-Wright
Cutler-Hammer
Dietz Co., Henry G.
Dietz Design & Mfg.
Dimco-Gray
Durakool Inc.
Eagle Signal Corp.
Edison Instr. Div.
Electric Switch Corp.
Electro-Tech. Equipt.
Electronic Specialty Co.
Electyme Motor Prods.
Elgin Natl. Watch
Ferrara, Inc.
G-V Controls
General Cement Mfg.
General Control Co.
General Controls Co.
GE, Apparatus Sales
GE Clock & Timer Dept.
Guardian Electl. Mfg.
Haledy Electronic Co.
Haydon Co., A. W.
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Hetherington, Inc.
Industrial Timer Corp.
Internat. Register Co.
Jaidinger
Johnson Service Co.
Kopp Scientific
Landis & Gyr
Leich Electric
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Lumenite Electronic
Mallory & Co., P. R.
Miller-Harris Instr. Co.
Minneapolis-Honeywell
Montgomery Mfg. Co.
Newark Electric Co.
Newmatic Corp.
Paragon Electric
Perfex Corp.
Photovolt Corp.
Precision Products, Inc.
Ribble Engrg. Co.
Richardson-Allen
Rhodes, Inc., M. H.
Sangamo Electric
Seely Instr. Co.
Square D Co.
States Co.
Stoelting Co.
Stromberg Time Corp.
Thomas Clock
Thompson Clock
Time Controls
Tork Time Controls
Ulanet Co.
Walker-Jamieson
Walser Automatic Timer
Ward Leonard Electric
Westinghouse Electric
Wilson & Co.
Yellow Springs Instr.
Zenith Electric

SWITCHES, Vacuum

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Barksdale Valves
Bendix, Eclipse-Pioneer
Bristol Co.
Century Electronics
Colvin Labs.
Cook Electric
Cooper-Hewitt Elect.
Cutler-Hammer
Dietz Co., Henry G.
Dwyer Mfg. Co., F. W.
Ebert Electronics
Eitel-McCullough
General Controls Co.
GE, Apparatus Sales
GE Components Div.
GE Gen. Purp. Contr.
GE, Tube Dept.
Gorn Electric
Hetherington, Inc.
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Mack Electric Devices
Manning, Maxwell & Moore
Mercoid Corp.
Pioneer Electronics
Sampson Chem. & Pigm.
Scaico Controls
United Electric Controls
U. S. Gauge Div.

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Amer. Mach. & Foundry
Bendix, Eclipse-Pioneer
Cedar Engrg. Co.
Clifton Prec. Prods.
Diehl Mfg.
Edison, Inc., Thomas A.
Electric Indicator Co.
Ford Instr. Co.
GE Apparatus Sales
Globe Industries, Inc.
Helipot Div.
Henschel Corp.
Induction Motors Corp.
Kearfott Co., Western Div.
Kollsman Instr. Corp.
Lear, Inc.
Lectronic Research Labs.
Luther Mfg. Co.
Mark Instr. Co.
Minneapolis-Honeywell,
  Boston Div.
Muirhead Instrument
Norden-Ketay
Oster Mfg. Co., John
Radex Corp.
Robertshaw-Fulton, Aeron
Small Motors, Inc.
Stepper Motors Corp.
Thordarson-Meissner
Transicoil Corp.
U. S. Gauge Div.
Vickers Elect. Div.

SYNCHRONOUS MOTORS, see Motors, Synchronous

SYNCHROSCOPES

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Bendix, Eclipse
DuMont Lab., Allen B.
Electric Controller
Feiler Engrg. Co.
GE Apparatus Sales
Haledy Electronic Co.
Hickok Electl. Instr.
Hycon Mfg. Co.
Kollsman Instr. Corp.
Millen Mfg. Co.
Roller-Smith
Square D Co.
Tektronix, Inc.
Telechrome, Inc.
T. L. G. Electric
Triplett Electl. Instr.
United Optical
Westinghouse Electric
Weston Electcl. Instr.

TACHOGRAPHS

Amthor Testing
Biddle Co., James G.
Cramer Conts. Corp.
Matisa Equipment
Metron Instr. Co.
Sangamo Electric
Scherr Co., Inc.
Sticht Co., Herman H.
Zeiss, Inc., Carl
Zernickow Co.

TACHOMETER TESTERS

American Time Prods.
Amthor Testing
Associated Research
B & H Instr. Co.
Berkeley Div.
Biddle Co., James G.
Boulin Instrument Corp.
Consolidated Avionics
Elect. Tachometer Corp.
Engineering Res. & Devel.
Gadgets Inc.
GE
Globe Industries
Howell Instr. Co.
Ideal Lab. Tool
I-L-S Instr. Corp.
Martindale Electric
Matisa Equipment
Pacific Scientific
Pioneer Instr. Co.
Potter Instr. Co.
Precision Scientific
Robertshaw-Fulton
Rowe Engrg. Co.
Servospeed Div.
Servo-Tek Prods. Co.
Standard Elect. Time
Sticht Co., Herman H.
Sun Mfg. Co.
Sunshine Scientific
Systron Corp.
Taller & Cooper, Inc.
United Mfg. Co. Div.
Wang Labs., Inc.
WacLine, Inc.
Westport Electric
Zeiss, Inc., Carl
Zernickow Co.

TACHOMETERS, Centrifugal
Amthor Testing
Associated Research
Barbour Stockwell Co.
Bendix-Eclipse-Pioneer
Biddle Co., James G.
Boulin Instr. Corp.
Corbin Screw Corp.
Durant Mfg. Co.
Elect. Tachometer Corp.
Electro-Tech Equip.
Foxboro Co.
GE
Hays Corp.
Instrument Associates
Jones Motrola Corp.
Kahn & Co.
Manning, Maxwell & Moore
Martindale Electric
Pioneer Instr. Co.
Scherr Co., Inc.
Seedburo Equipment
Square D Co.
Stewart-Warner
Sticht Co., Herman H.
Testing Machines, Inc.
Veeder-Root
Viking Instr. Co.
Zernickow Co.

TACHOMETERS, Chronometric
Amthor Testing
Associated Research
Bendix Aviation Corp.
Berkeley Div.
Biddle Co., James G.
Boulin Instr. Corp.
Computer Measmts. Corp.
Cramer Controls Corp.
Elect. Tachometer Corp.
Electro-Tech Equip.
Elgin Natl. Watch Co.
Epic, Inc.
Hasler-Tel
I-L-S Instr. Corp.
Jaeger Watch Co.
Marx Co., Clarence J.
Matisa Equipment
Pierce Watch Co.
Potter Instr. Co.
Scherr Co., Inc.
Std. Elect. Time
Stewart-Warner Corp
Sticht Co., Herman H.
Technical Oil Tool Corp.
Testing Machines, Inc.
Westport Electric
Wright Engrg. Co.
Zernickow Co.

TACHOMETERS, Electric and Electromagnetic
Air Equipment
Airpax Products
American Electronics
Associated Research
B & H Instr. Co.
Bailey Meter Co.
Barbour Stockwell Co.
Beckman & Whitley
Bekey Elect. Co.
Bendix-Eclipse-Pioneer
Berkeley Div.
Bristol Co.
Builders-Providence
Burton Mfg. Co.
Chicago Elect. Tachometer
Clarke Instr. Corp.
Control Engrg. Co.
Crown Indust. Products
D & R, Ltd.
Detectron Co.
Diehl Mfg. Co.
Dynapar Corp.
Eastern Air Devices
Elect. Auto-Lite
Elect. Indicator Co.
Elect. Speed Indic. Co.
Elect. Tachometer Corp.
Electrical Devel.
Electro Engrg. Prod. Co.
Electro-Mechano Co.
Electronic Measmts. Corp.
Engineering Res. & Devel.
Esterline-Angus
Fielden Instr. Div.
Ford Instr. Co.
Foxboro Co.
GE, Apparatus Sales
General Radio
Hastings Instr. Co.
Hathaway Instr. Co.
Hays Corp.
Helipot Div.
Henschel Corp.
Hewlett-Packard
Hickok Electcl. Instr.
Howell Instr. Co
Hupp Instrumation
Ideal Indsts., Inc.
I-L-S Instr. Corp.
Instrument Associates
Instrument Lab. Inc.
Internatl. Res. & Devel.
Jaeger Watch
J-B-T Instruments
Jones-Motrola Sales
Kay Electric
Kintel
Kearfott Co., Inc.
Kollsman Instr. Corp.
Lear, Inc.
Marion Electl. Instr. Co.
Martin-Decker
Marx Co., Clarence J.
Matisa Equipment
Metron Instr. Co
Micro Balancing, Inc.
Minneapolis-Honeywell
  Boston Div.
Minnesota Electronics
Moisture Register Co.
Natl. Instr. Co
Norden-Ketay Corp.
Nuclear Research
Photocon Research
Pitometer Log Corp.
Potter Aeornaut. Co.
Potter Instr. Co
Raydyne Corp.
Reliance Electric & Engrg.
Rotating Components
Scherr Co., Inc.
Servo-Tek Products
Shepard Labs.
Square D Co.
Std. Elect. Time
Stewart-Warner
Sticht Co., Herman H.
Sun Electric
Sunshine Scientific
Syntorque, Inc.
Task Corp.
Tech. Oil Tool Corp.
Transicoil Corp.
Triplett Elect. Instr.
WacLine, Inc.
Waltham Watch
Wang Labs., Inc.
Waugh Engrg. Co.
Westberg Mfg. Co.
Weston Electcl. Instr.
Westport Electric
Westronics, Inc.
Winslow Co.
Yellow Springs Instr. Co.

TACHOMETERS, Miscellaneous, including Cross Pendulum, Fly-ball, Ignition actuated, Tilting-ring (see also Frequency)
Amthor Testing
Associated Research
Barbour Stockwell Co.
Biddle Co., James G.
Boulin Instr. Corp.
Eitzen Co., Louis C.
Elect. Tachometer Corp.
Electro-Mechano Co
Electro-Tech Equipment
Engineering Res. & Devel.
I-L-S Instr. Corp.
Jones-Motrola Corp.
Kahn & Co.
Marx Co., Clarence J.
Nuclear Research
Performance Measmts. Corp.
Potter Instr. Co.
Shephard Labs.
Stewart-Warner
Sticht Co., Herman H.
Sun Electric
Viking Instr. Co.
Wang Labs., Inc.
Westberg Mfg. Co.
Zernickow Co.

TACHOMETERS, Recording
Amthor Testing
Bailey Meter Co.
Barber-Colman Co.
Berkeley Div.
Biddle Co., James G.
Breeze Corp.
Bristol Co.
Builders-Providence
Electr. Tachometer Corp.
Electr. Devel. Co.
Engineering Res. & Devel.
Engler Instr. Co.
Esterline-Angus
Fielden Instr. Div.
GE, Apparatus Sales
Impact Register Co.
Logan Engrg. Co.
Manning, Maxwell & Moore
Martin-Decker Corp.
Matisa Equipment
Metron Instr. Co.
Minneapolis-Honywell,
  Indust. Div.
Optronic Co.
Potter Aeronaut Co.
Potter Instr. Co.
Scherr Co., Inc.
Sticht Co., Herman H.
Systron Corp.
Waugh Engrg. Co.
Westberg Mfg. Co.
Weston Elect. Inst.
Wheelco Div.
Zernickow Co.

TACHOMETERS, Speed Limit Control
American Electronics
Askania Reg. Co.
B & H Instr. Co.
Barbour Stockwell Co.
Bendix, Eclipse-Pioneer
Bristol Co.
Burton Mfg. Co.
Dynapar Corp.
Electr. Tachometer Co.
Electric Indicator
Electro Mechano Co.
Engler Instr. Co.
Fielden Instr. Div.
Flight Research Inc.
GE, Apparatus Sales
Helipot Div
Howell Instr. Co.
Hupp Instrumation
I-L-S Instr. Corp.
Jones-Motrola Corp.
Kahn & Co
Marx Co., Clarence J.
Matisa Equipment
Metron Instr. Co.
Nuclear Research
Potter-Aeronaut. Co
Servo-Tek Products
Servomechanisms, Inc.
Standard Elect. Time
Sticht Co., Herman H.
Systron Corp.
Tipp-Tronic, Inc.
WacLine, Inc.
Wang Labs., Inc.
Westberg Mfg. Co
Weston Electcl. Instr.
Zernickow Co.

TACHOMETERS, Stroboscopic
Associated Research
Berkshire Labs.
Boulin Instr. Corp.
Clarke Instr. Corp.
Computer Co. of Amer.
Cubic Corp.
Davenport Mfg. Co.
Electronic Measmts. Co
Electro-Tech Equip.
Epic, Inc.
Fruengel Inc., Frank
GE, Apparatus Sales
General Radio Co.
I-L-S Instr. Corp.
Internatl. Res. & Devel.
Mercury Electronic Co.
Nankervis Co.
Opad Electric
Slaughter Co.
Standard Elect. Time
Stewart-Warner
Sticht Co., Herman H.

TACHOMETERS Vibrating Reed
Aero Instr. Co.
Biddle Co., James G.
Epic, Inc.
J-B-T Instruments
Sticht Co., Herman H.
Testing Machines, Inc.
WacLine, Inc.

TACHOSCOPES
Amthor Testing
Biddle Co., James G.
I-L-S Instr. Corp.
Lafayette Instr. Co.
Scherr Co., Inc.
Sticht Co., Herman H.
Zernickow Co.

TAFFRAIL LOGS, Ship, see Marine Instruments

TALC
Baker Chem. Co., J. T.
Berkshire Chemicals
General Ceramics
Harshaw Chemical Co.
Kirchberger & Co.
Rhodes & Co.
Superior Steatite
Wagner Co., Inc., C. A.

TANTALUM, see Precious Metals

TAPE, Magnetic Recording
ALWAC Corp.
Amer. Silver Co.
Ampex Corp.
Arnold Engrg. Co.
Duotone Co., Inc.
Electronic Mechanics
Librascope, Inc.
Minnesota Mining & Mfg.
Newark Electric Co.
Northam Electronics
Orradio Industs., Inc.
Permo, Inc.
Polymer Corp. of Amer.
Reeves Soundcraft
Remington Rand Univac
Robins Industries

TAPE RECORDERS, see Recorders, Magnetic Tape

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JAGABI® TACHOSCOPES
JAGABI® SPEED INDICATORS
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METRON TACHOMETERS
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WIRE & YARN TENSIOMETER
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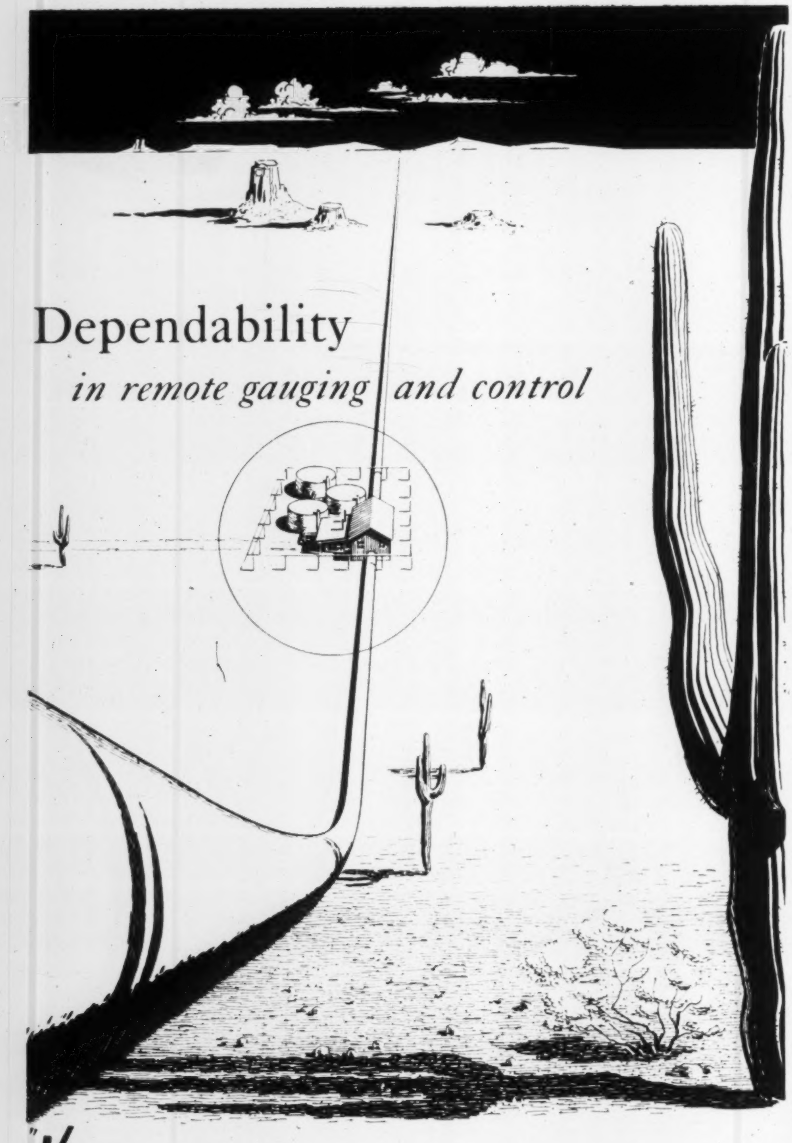
TACHOMETERS ◆ TACHOSCOPES
O. ZERNICKOW CO.
17 PARK ROW, NEW YORK 38, N. Y.
For more information circle 336 on inquiry card.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ISOLATED LOCATIONS, such as this lonely pumping station, provide the acid test for remote control gauging and operating equipment. Prolonged exposure to the ravaging effects of sun, wind, sand and rapid temperature changes demands the absolute best in the design and manufacture of all equipment. There is never room for costly compromise.

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Cable address: Varec Compton Calif (U.S.A.) All Codes
961-24

For more information circle 337 on inquiry card.

TAPE STRETCHER APPARATUS

Testing Machines, Inc.

TAPES, Oil Gager's

Bruning Co., Charles
Dietzgen Co.
Keuffel & Esser
Lufkin Rule Co.
Shand & Jurs
Starrett Co., L. S.
White Co., David

TAPES, Steel (see also Dimensional Gages)

Bruning Co., Inc.
Dietzgen Co.
Gaertner Scientific
Graf-Apsco
Gurley, W. & L. E.
Keuffel & Esser
Lufkin Rule Co.
Miller Falls Co.
Speidel & Co.
Stanley Works
Starrett Co., L. S.
United States Blue Print
Warren-Knight Co.
Weber Co.
White Co., David

TAPES, Surveyor's, see Surveying Instruments

TAPS, Metric

Amer. Laubscher
Automatic Methods
Bayside Watch Tool
DoAll Co.
Engis Equipment Co.
Ferner Co.
Fineisen, A. R.
Gallien, R. P.
Howard Clock Products
Hy-Pro Tool Co.
Jarvis Co., Chas.
Landis Mach. Co.
Morris Co., J. I.
Pratt & Whitney
Sphinx American Co.
Waltham Screw Co.
Woodruff & Stokes

TAPS, Special

Amer. Laubscher
Continental Screw
DoAll Co.
Engis Equipment Co.
Fineisen, A. R.
Gallien, R. P.
Hamilton Watch
Hy-Pro Tool Co.
Jerpbak-Bayless
Landis Mach. Co.
Morris Co., J. I.
Pratt & Whitney
Sphinx American Co.
Waltham Screw Co.
Woodruff & Stokes

TAXI METERS

Rockwell Mfg. Co.

TELEGRAPHY, Automatic, including Reperforators, Tape Perforators, Tape Transmitters, Teleprinters, Teletypers

Boehme, H. O. Inc.
Bunnell & Co., J. H.
CGS Labs., Inc.
Commercial Controls Corp.
Consolidated Avionics
Ferranti Electric
Gates Radio Co.
Intelex Systems
Kleinschmidt, Inc.
Monroe Calc. Mach. Co.
National Controls
Stelma, Inc.
Taller & Cooper, Inc.
Teletype Corp.
U. S. Instr. Corp.

TELEGRAPHY EQUIPMENT, including Keys, Switches, etc.

Alden Products
Boehme, H. O., Inc.
Bunnell & Co., J. H.
CGS Labs, Inc.
General Control Co.
Johnson Co., E. F.
Stelma, Inc.

TELEMETERING SYSTEMS, Electrical, including Remote-Control Equipment

A. R. F. Products
Adler Electronics
Aero Electronics
Airborne Accessories
AiResearch Mfg.
Airflo Instr. Co.
Amer. Electroneering
Amer. Electronic Labs.
Amer. Kloeckner
Amer. Mach. & Foundry
Amer. Meter Co.
Amer. Temp. Indic. Co.
Ampex Corp.
Applied Science Corp.
Assembly Products
Austin Co.
Authorized Manufacturers
Autom. Control Co.
Autom. Electric
Autom. Switch
Autom. Timing & Controls
Automation Products
Autron Engrg., Inc.
Avion Div.
B-I-F Industries
BJ Electronics
Bailey Meter
Baldwin-Lima-Hamilton
Barber-Colman
Barton Instr.
Bendix, Eclipse-Pioneer
Bendix-Pacific
Berkeley Div.
Black, Sivalls, & Bryson
Bogue Elect. Mfg. Co.
Bristol Co.
Bristol Engrg.
Bristol Motor Div.
Brooks Rotameter Co.
Brush Electronics
Builders-Providence
Cal-Tronics Corp.
Clark Controller Co.
Clarke Instr. Corp.
Cleveland Fuel Equipt
Commercial Controls
Computer Co. of Amer.
Computer Control Co.
ConRay Corp.
Consolidated Avionics
Consol. Electrodynamics
Control Corp.
Control Specialty Corp.
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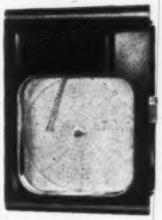

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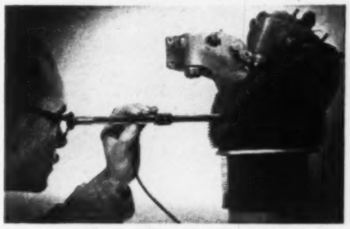

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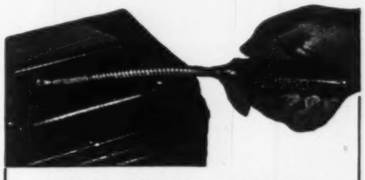

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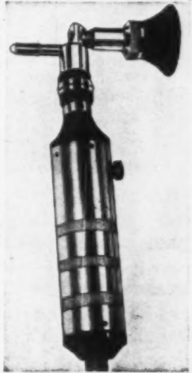

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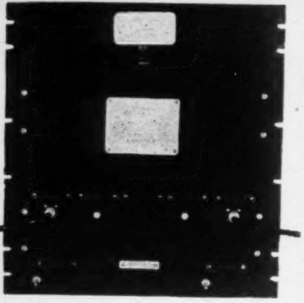

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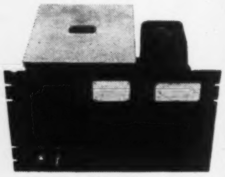

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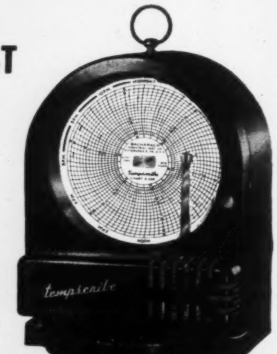

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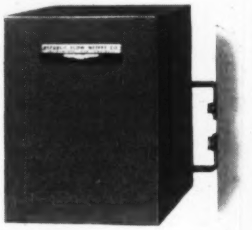
Clifford Mfg. Co.
Commercial Research
Cook Electric Co.
Cooper Co., Clark
Cuthbert Co., Inc.
Cutler-Hammer
Cybertronic Corp.
Dahl Co., Inc., G. W.
Davenport Mfg. Co.
Dickson Co.
Douglass Automatic
E-T-A Products
Ebert Electronics
Eclipse Fuel Engrg. Co.
Edison Electcl. Controls
Edison Inc., Thomas A.
Electric Hotpack Co.
Electrimatic Corp.
Electro Medical Lab.
Electro-Tech. Equipt.
Electronic Products
Electronics Corp. of Amer.
Elgin Natl. Watch
Emerson Apparatus Co.
Engelhard, Chas.
Farnsworth Electronics
Farris-Stacon
Fenwal, Inc.
Ferner Co.
Fielden Instr. Div.
Fischer & Porter Co.
Fisher Scientific
Fish-Schurman
Foster Engrg. Co.
Fox Valley Instr.
Foxboro Co.
Fuel Watchman
Fulton-Sylphon Div.
G-M Labs.
G-V Controls Inc
General Controls Co.
GE. Apparatus Sales
Genl. Regulator Corp.
Gleason Avery, Inc.
Gordan Co., Claud S.
Gotham Instr. Div.
Greiner, Emil
H-B Instr. Co
H-H Thermostats
Hagan Chem. & Controls
Hallikainen Insts.
Hammel-Dahl
Hart Mfg. Co.
Hays Corp.
Huppert Co., K. H.
Illinois Testing Labs.
Industrial Control Panel
Indust. Engrg. Corp.
Instrument Rep. & Mfg.
Jaidinger Mfg. Co.
Jelrus Co.
Johnson Service Co.
Jordan Corp.
Jordan Reg. Co.
Kaye & MacDonald
Keckley Co.
Kessler Co.
Kieley & Mueller
Klipfel Valve Div.
Larson Instr. Co.
Leeds & Northrup
Leslie Co.
Lewis-Engrg. Co.
Loudon Insts. Div.
Magnetic Controls
Magnetic Instr. Co.
Manning, Maxwell & Moore
Marsh Corp.
Mason Instr. Co.
Mason-Neilan Div.
McAlear Mfg. Co.
Mercoid Corp.
Minn-Honeywell Boston
Minneapolis-Honeywell Indust. Div.
Modern Lab. Equipt. Co.
Moeller Instr. Co.
Moisture Register Co.
Moore Products
National Controls
Neutronics Research
Olympic Devel. Co.
Orban Co., Kurt
Partlow Corp.
Penn Insts. Div.
Perfex Controls Div.
Perfex Corp.
Phen-Trols Inc.
Phila. Thermometer Co.
Phoenix Prec. Instr.
Pimex, Inc.
Powers Reg. Co.
Precision Scientific
Precision Thermom.
Preferred Utilities
Pyrometer Instr. Co.
Pyrometer Service Co.
Rascher & Betzold
Refinery Supply Co.
Republic Flow Meters
Research Controls
Revere Corp.
Rheem Mfg. Co.
Robertshaw-Fulton
Robinette Co., W. C.
Rochester Mfg. Co.
Rockwell Engrg. Co.
Rubicon Co.
Sarco Co.
Scaico Controls
Scientific Glass App.
Scientific Instr. Co.
Security Valve Corp.
Seely Instr. Co.
Serdex, Inc.
Servo Corp. of Amer.
Soreng Products
Spence Engrg. Co.
Spencer Thermostat Div.
Squires Co., C. E.
Std. Electronic Res.
Sterling Inc.
Stevens Mfg. Co.
Struthers-Dunn
Swartwout Co.
Swieco Inc.
Taylor Instr. Cos.
Tell-Tronics Prods.
Temp. Engrg. Corp.
Tensitron, Inc.
Thermo-Electric Co.
Thermo Electric Mfg. Co.
Termometer Corp.
Thwing—Albert
Tipp-Tronic, Inc.
Trerice Co.
Tuttle & Kift, Inc.
Uehling Instr. Co.
Ulanet Co.
United Control Corp.
United Electric Controls
United Optical Mfg.
U. S. Gauge Div.
Valverde Labs.
VecTrol Engrg., Inc.
Victory Engrg.
Viking Instruments
Watts Reg. Co.
Weksler Thermom. Corp
West Instr. Corp.
Weston Electcl. Instr.
Westronics, Inc.
Wheelco Instr. Div.
White Mfg. Co.
White-Rodgers
Yellow Springs Instr. Co.

TEMPERATURE INSTRUMENTS, see Thermometers, also Pyrometers

TEMPERATURE REGULATORS, Self Operated

Advanced Insts.
AiResearch Mfg. Co.
Amer. Instr. Co.
Apex Scientific
Askania-Werke, A. G.
Assembly Products
Atlas Valve Co.
Autron Engrg., Inc.
Bar-Ray Prods.
Basic Controls, Inc.
Bayley Instr. Co.
Blue M Electric



REPUBLIC PNEUMATIC TRANSMITTERS

Republic pneumatic transmitters are devices for converting process variables (such as flow, pressure, liquid level, liquid density, temperature, or a primary control setting) into air pressures that vary proportionally with the process variable. In the case of control transmitters, the air pressure output can be made to follow linear or non-linear relationships to the input signal.

These air pressures can be used to transmit variable data to automatic controllers or to actuate direct-reading gages and/or recorders.

WRITE FOR BULLETIN No. 57-4

REPUBLIC FLOW METERS CO.
2240 Diversey Pkwy. Chicago 47, Ill.

REPUBLIC
INSTRUMENTS • CONTROLS

For more information circle **343** on inquiry card.

TEMPERATURE MONITORING SYSTEM

Signals Dangerous Temperatures From Many Points

T-E's Temperature Monitoring System can be located near to or remote from the process area. When temperature exceeds desired, preset limit, danger is indicated by a red light, which remains red until the adverse temperature is corrected, or by an alarm which remains on until a silencing button is pressed.

- **Monitors up to several hundred points in one system**
- **Available with single or multiple set points**
- **Monitors temperatures from −320°F. to +3000°F.**
- **Functions with thermocouples or resistance bulbs**
- **Signals may be transferred to indicators or recorders**
- **Continuous scanning**
- **Switching speed (standard)—3 seconds per point**

Other speeds available: As fast as 2.5 points per second; as slow as 6.6 seconds per point.

Write for bulletin 72-FF

Thermo Electric Co., Inc.
Saddle Brook, New Jersey

In Canada—
Thermo Electric (Canada) Ltd., Brampton, Ont.

For more information circle **344** on inquiry card.

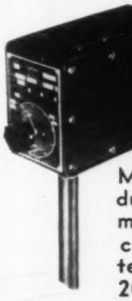
Automatic Temperature Control

with BURLING

Differential expansion instruments . . .

for accurate and reliable temperature regulation.

Model B-1C Small, lightweight unit, for temperatures under 800°F.



Model F-1C Heavy duty unit for locally mounted non-indicating control, temperatures up to 2000°F.

Burling Controls for electric and pneumatic systems operate through the variation in the expansion of different solids up to 2000°F, making possible long and "trouble-free" installations. Operating differentials as close at ±1/4° may be maintained.

The complete Burling line includes indicating and non-indicating types, choice of one, two or three switch models with standard, weathertight or explosion-proof housings and feature simple installation.

Burling instruments are equally well suited for high and low temperature alarms and cut-outs.

Write for free catalog or consult our engineers for your next temperature-control application.

Burling Temperature Controls

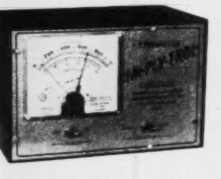
Burling
INSTRUMENT COMPANY

16 River Road, Chatham, N. J.

For more information circle **345** on inquiry card.

CONTROLS

SIMPLYTROL AUTOMATIC TEMPERATURE CONTROL, THERMOCOUPLE OR THERMISTOR-ACTUATED



Compact
Reliable
Simple

Ranges from −400°F. to +3000° F.

Indicating accuracy 2%.

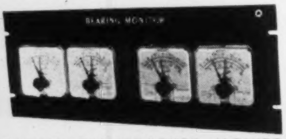
Control accuracy often better than ½%.

Cat. 4535 0-1000°F. I C
Approx. 10 x 6 x 7" **$135**

On-off control or automatic shut-down for furnaces, ovens, kilns, etc.

Load relay is SPDT 5 amps. Optional heavy duty relays to 40 amps. Indicating meter-relay is medium high resistance and has bimetal cold junction compensation.

No leveling required—just connect thermocouple, connect load, and plug in to 115 or 230 volt AC line.



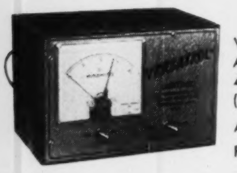
BEARING TEMPERATURE MONITOR

Cat. No. 3590-4 **$355.00**

Meter-relays, operating directly from thermocouples, give immediate warning or shut-down upon temperature rise in bearings (or other danger points). A number of points can be monitored independently and continuously.

VERSATROL AUTOMATIC CONTROLS

For any variable that can be measured electrically. Adjustable control points. Automatic operation.



Cat. 3581

Versatrol High Limit Automatic with 451-C Meter-Relay (0-20 Ua DC)

Approx. 10 x 6 x 7"

Price **$154.25**

Versatrol consists of a meter-relay and all components for a complete control assembly. Any range or type of meter-relay can be supplied in a Versatrol.

They can be calibrated in any function that can be converted to electrical units. Load relays have 5 ampere contacts. Control point is adjustable from the front.

Control can be high limit (on an increase in signal), low limit (on a decrease in signal), or double (control action on rise or fall of signal).

Versatrol can be used for continuous on-off control or for shut-down or alarm. Available in wall cabinet, panel mount, "U-Mount-It" etc.

Need overload protection? The load sentry is a specially designed versatrol, for protection of machine tools, dies and motors from overload. Furnished in NEMA 12 housing. Can detect two pieces of stock moving through die. Ask for data sheet 7-A.

ASSEMBLY PRODUCTS, INC.

CHESTERLAND 6, OHIO

Phone: (Cleveland, O.) HAmilton 3-4436

For more information circle **346** on inquiry card.

Bristol Co.
Chatham Conts. Corp.
Cooper Co., Clark
Davenport Mfg. Co.
Douglas Automatic
Eclipse Fuel Engrg. Co.
Fenwal, Inc.
Fielden Instr. Div.
Fischer & Porter
Foster Engrg. Co.
Fulton Sylphon Div.
General Controls Co.
Greiner, Emil
H-B Instr. Co.
Huppert Co.
Johnson Service Co.
Jordan Corp. Div.
Kaye & MacDonald
Keckley Co.
Klipfel Valves
Larson Instrument
Leslie Co.
Magnetic Research Corp.
Manning, Maxwell & Moore
Marsh Corp., Jas. P.
McAlear Mfg. Co.
Minneapolis-Honeywell
  Indust. Div.
Modern Lab. Equipt. Co.
Moeller Instr. Co.
Neutronics Research
Partlow Corp.
Pimex, Inc.
Powers Reg. Co.
Pyrometer Instr. Co.
Robertshaw-Fulton
Sarco Co.
Scient. Instr. Co.
Spence Engrg. Co.
Spencer Thermostat Div.
Squires Co., C. E.
Std. Electronic Res.
Stratos Div.
Taylor Instr. Cos.
Tell-Tronics Prods.
Thermo-Electric Co.
Tipp-Tronic, Inc.
Trerice Co.
United Control Corp.
United Electric Controls
Victory Engrg. Corp.
Warren Engrg. Co.
Watts Reg. Co.
West Instr.
Weston Elect. Inst.
Yellow Springs Instr. Co.

TEMPERATURE SENSITIVE PAINT and CRAYONS

Electro-Tech Equip.
Gordon Co., Claud S.
Tempil Corp.
Tenney Engrg. Co.

TEMPERATURE STANDARDS, see Standards, Temperature

TEMPERATURE TRANSMITTERS, Electrical Output

Arnoux Corp.
Askania-Werke, A. G.
Assembly Products
Autron Engrg., Inc.
B-I-F Industries
Bailey Meter Co.
Barber-Colman
Bendix, Friez Instr. Div.
Bendix-Pacific
Bristol Co.
Davenport Mfg. Co.
Edison, Inc., Thomas A.
Fielden Instr. Div.
Fischer & Porter Co.
GE, Apparatus Sales
Giannini & Co., G. M.
Hagan Chem. & Controls
Hays Corp.
Manning, Maxwell & Moore
Minco Products
Penn Insts. Div.
Rheem Mfg. Co.
Ruge Assocs., Arthur C.
Scientific Instr. Co.
Shand & Jurs
Swartwout Co.
Taylor Instr. Cos.
Trans-Sonics, Inc.
United Control Corp.
Vapor Recovery Sys. Co.
VecTrol Engrg., Inc.

TEMPERATURE TRANSMITTERS, Pneumatic Output

Askania-Werke, A. G.
B-I-F Industries
Bailey Meter Co.
Black, Sivalls & Bryson
Bristol Co.
Burling Instr. Co.
Fischer & Porter Co.
Foxboro Co.
Fulton Sylphon Div.
Hagan Chem. & Controls
Johnson Service Co.
Leslie Co.
Manning, Maxwell & Moore
Mason-Neilan Div.
Minneapolis-Honeywell
  Indust. Div.
Moore Products
Penn Insts. Div.
Powers Reg. Co.
Pyrometer Instr. Co.
Republic Flow Meters
Research Controls
Scientific Instr. Co.
Taylor Instr. Cos.
U. S. Gauge Div.

TENDERNESS TESTERS, see Softness Testers

TENSILE TEST MACHINES, see Testing Machines

TENSIOMETERS (See also Surface Tension)

Baldwin-Lima-Hamilton
Boulin Instr. Corp.
Brush Electronics
Central Scientific
Chatillon & Sons
Custom Scientific Insts.
Dillon & Co., W. C.
Eitzen Co., **Louis C.**
Emery Co., A. H.
Federal Products
GE
Georator Corp.
Gilmore Industries
Instr. Devel. & Mfg. Corp.
Kushner, Joseph B.
Martin-Decker Corp.
Metron Instr. Co.
Millers Falls
Olsen Testing Machine
Pacific Scientific Co.
Refinery Supply Co.
Rutico, Inc.
Saxl Instr. Co.
Schaevitz Engineering
Statham Labs.
Superdraulic Corp.
Suter, Alfred
Telechrome, Inc.
Tensitron, Inc.
Testing Machines, Inc.
Thwing-Albert
Toledo Scale Co.
WacLine, Inc.
Westronics, Inc.

TENSION INDICATORS (see also Textile Test Instruments)

Allied Products Div.
Ann Arbor Instr. Works
Askania Werke, A. G.
Baldwin-Lima-Hamilton
Boulin Instr. Co.
Brush Electronics
Chatillon & Sons
Daystrom Instrument
Daytronic Corp.
Dillon Co., W. C.
Eitzen Co., Louis C.
Emery Co., A. H.
Exact Weight Scale Co.
Federal Products
GE
Georator Corp.
Gilmore Industries
Imtra Corp.
Jo-Line Tools
Martin-Decker Corp.
Olsen Testing Mach.
Pacific Scientific
Precision Scientific
Saxl Instr. Co.
Seederer-Kohlbusch
Streeter-Amet
Thwing-Albert
Tensitron, Inc.
Wiancko Engrg. Co.

TERMINAL BLOCKS

AMP, Inc.
Aerovox Corp.
Aerolite Electronics
Akron Porcelain Co.
Alden Products
Allen-Bradley Co.
Ampco Mfg. Co.
Amphenol Electronics
Armel Electronics
Auto. Electric Sales
Autom. Electric
Brit. Electronic Sales
Buchanan Electcl. Prods.
Burndy Engrg. Co.
Cambridge Thermionic
Cinch Mfg. Co.
Cinema Engrg. Co.
Cleveland Metal Specs.
Collectron Corp.
Continental Connector
Continental-Diamond **Fibre**
Cook Electric
Curtis Devel. & Mfg. Co.
Cutler-Hammer
Dimco-Gray
Eastern Specialty Co.
Electric Tachometer Corp.
Electronic Mechanics
Excellex Electronics
Federal Screw Prods. Co.
Ford Instr. Div.
GE Apparatus Sales
Garde Mfg. Co.
Graphik Circuits, Div.
Grayhill
Grigoleit Co.
Helipot Div.
Hermaseal Co.
Jones Div. Howard B.
Kulka Electric
Lab-Tronics
Lenkurt Electric
Lerco Electronics
Litton Industries
Lynn Electronic Res.
Millen Mfg. Co.
Miller Dial & Name Plate
Molded Insulation Co.
North Electric
Reeves Instr. Corp.
Reiner Electronics
Richardson Co.
Ritchie & Co.
Rogan Brothers
Smith, Inc., Herman H.
Spaulding Fibre Co.
States Co.
Steatite Div.
Stokes Molded Prods.
Stromberg-Carlson
Stupakoff Div.
Suffolk Prods. Co.
Superior Steatite
Torwico Electronics
U. S. Gasket Co.

U. S. Instr. Corp.
Waterbury Co's.

TERMINAL BOARDS

Aerolite Electronics
Aerovox Corp.
Aircraft Radio Corp.
Alden Products
Ampco Mfg. Co.
Amphenol Electronics
Armel Elects.
Atlas E-E Corp.
B/W Controller
Buchanan Electcl. Prods.
Cambridge Thermionic
Cinch Mfg. Co.
Cirtronics Corp.
Collectron Corp.
Continental Connector
Cook Electric
Corning Glass Works
Curtis Devel. & Mfg. Co.
Dimco-Gray
Electronic Mechanics
Excellex Electronics
Federal Screw Prod. Inc.
Formica Co.
GE, Apparatus Sales
Garde Mfg. Co.
Graphik Circuits, Div.
Indust. Hrdw. Mfg. Co.
Instrument Tool & Engrg.
Insuline Corp. of Amer.
Jones Div., Howard B.
Kulka Electric
Lab-Tronics
Lerco Electronics
Mica Insulator
Millen Mfg. Co.
Miller Dial & Name Plate
Molded Insulation
Newark Electric Co.
Photo Chemical Prods.
Reeves Instr. Corp.
Reiner Electronics
Richardson Co.
Sealtron Corp.
Smith, Inc., Herman H.
States Co.
Steatite Div.
Suffolk Prods. Co.
Sylvania Electric Prods.
Torwico Electronics
Tri-Dex Electronics
U. S. Engrg. Co.
U. S. Gasket
Vector Electronic
Viking Industries
Virginia Electronics

TERMINAL STRIPS

AMP, Inc.
Aerolite Electronics
Aerovox Corp.
Aircraft Radio Corp.
American Lava Corp.
Ampco Mfg. Co.
Amphenol Electronics
Armel Electronics
Auto. Electric Sales
Autom. Electric
Birnbach Radio Co.
Buchanan Electcl. **Prods.**
Burndy Corp.
Cambridge Thermionic
Cannon Electric
Cinch Mfg. Co.
Coaxial Connector Co.
Collectron Corp.
Continental-Diamond
Cook Electric
Curtis Devel. & Mfg. Co.
Electronic Mechanics
Excellex Electronics
Federal Screw Prods.
Garde Mfg. Co.
GE
Graphik Circuits, Div.
Indust. Hrdw. Mfg. Co.
Insuline Corp. of Amer.
Jones Div., **Howard B.**
Kulka Electric
Lab-Tronics
Lerco Electronics
Mica Insulator
Millen Mfg. Co.
Miller Dial & Name Plate
Natl. Aircraft Corp
Newark Electric Co.
North Electric
Reeves Instr. Corp.
Reiner Electronics
Richardson Co.
Sangamo Electric
Silicone Seals, Inc.
Smith, Inc., Herman H.
Spaulding Fibre Co.
States Co.
Steatite Div.
Stromberg-Carlson
Suffolk Prods. Co.
Sylvania Electric Prods.
Torwico Electronics
Tri-Dex Electronics
U. S. Engrg. Co.
U. S. Instr. Corp.
U. S. Gasket
Vector Electronic
Viking Industries
Virginia Electronics
Waldom Electronics
Waterbury Co's.

TERMINALS

AMP, Inc.
Aerolite Electronics
Alden Products
American Brass Co.
American Lava Corp.
Ampco Mfg. Co.
Armel Electronics
Atlas E-E Corp.
Bead Chain Mfg. Co.
Birnbach Radio Co.
Brit. Electronics Sales
Buchanan Electcl. Prods.
Burndy Engrg. Co.
Cambridge Thermionic
Cinch Mfg. Co.
Cinema Engrg. Co.
Circon Component Co.
Coaxial Connector Co.
Collectron Corp.
Constantin & Co., L. L.
Continental Connector
Cook Electric
Creative Plastics Corp.
Dimco-Gray Co.
DuMont Labs., Allen B.
Eastern Specialty Co.
Eby, Inc., Hugh H.
Electric Auto-Lite Co.
Excellex Electronics
Federal Screw Prods.
Garde Mfg. Co.
Goe Engrg. Co.
Grayhill
Indust. Hrdw. Mfg. Co.
Kulka ElectricMfg.
Lab-Tronics
Lerco Electronics
Littlefuse, Inc.
Microdot, Inc.
Millen Mfg. Co.
North Electric
Res. Dev. Manufacture
Revere Corp. of Amer.
Sealtron Corp.
Shakeproof Div.
Smith, Inc., Herman H.
States Co.
Steatite Div.
Stupakoff Div.
Technical Soldering Co.
Thomas & Betts
Thor Ceramics, Inc.
Torwico Electronics
Triad Transformer
U. S. Gasket Co.
Vaco Products
Vector Electronic
Waldom Electronics
Winchester Electronics

TERMINALS, Hermetic

Amer. **Lava** Corp
Biggs Co., Carl H.
Burndy Engrg. Co.
Centralab
Ceramaseal Co.
Clifford Mfg. Co.
Durakool, Inc.
Electrical Industries
Electronic Mechanics
Farnsworth Electronics
Fish-Schurman
Fusite Corp.
Garde Mfg. Co.
General Ceramics
Glass Engrg. Co.
Glass-Solder Engineering
Hermaseal Co.
Hermetic Sealed Prods.
International Resistance Co.
Lab-Tronics
Litton Industries
Microdot, Inc.
Phaostron Corp.
Potter & Brumfield
Radiation Counter Labs.
Regal Instr. Co.
Sealtron Corp.
Specialties, Inc.
Steatite Div.
Stupakoff Div.
Sylvania Electric Prods.
Tech. Soldering Co.
Thermo Materials, Inc.
Thor Ceramics, Inc.
Tinnerman Prods.
Torwico Electronics
Triad Transformers Corp.
U. S. Gasket
U. S. Stoneware Co.
Winslow Co., Inc.

TEST BLOCKS

Aerolite Electrs.
Brown & Sharpe
Buchanan Electcl. Prods.
Clarke Instr. Inc.
Detroit Testing Mach.
Eastern Spec. Co.
Eitzen Co., Louis C.
Fish-Schurman
Fonda Gage Co.
GE. Apparatus Sales
Gordon Co., Claud S.
Kent Cliff Labs. Div.
King Tester Corp.
Olsen Testing Mach.
Scherr Co., Inc.
States Co.
Steel City Testing Mach.
Testing Machines, Inc.
Torsion Balance Co.
Van Keuren Co.
Wilson Mech. Instr. Div.

TEST BLOCKS, Textile, see Textile Test Instruments

TEST CHAMBERS, see Environmental Test Chambers

TEST SETS, Diode, see Diode Test Sets

TEST STANDS, Propeller, see Propeller

TEST WEIGHTS, see Weights, Avoirdupois Metric or Troy

TESTERS, see the Object of Test, e.g.

Abrasion Testers,
Asphalt Testers,
Battery Testers,
Circuit Testers,
Coil Testers
Flash Point Testers

TESTERS, Air Speed Indicators, see Aircraft Instrument Testers

JOHNSON AUTOMATIC TEMPERATURE CONTROL

FOR ALL TYPES OF INDUSTRIAL APPLICATIONS

Processing • Heating • Cooling • Humidifying
Dehumidifying • Ventilating • Air Conditioning

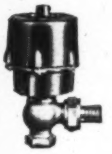
PROCESS CONTROL. Automatic temperature and humidity control for a wide range of manufacturing and industrial process applications. Thermostats, special controllers, valves and dampers applied to tanks, dryers, vats, kettles, curing rooms, coolers, kilns, ovens and other processing equipment.

SPACE CONTROL. Automatic control of room temperature and humidities applied to radiators, radiant heating, unit ventilators, unit heaters and heat delivery ducts. Johnson equipment includes a complete line of thermostats, thermometers, pressure regulators, humidostats, humidifiers, valves, dampers, damper operators, switches, special controllers and related apparatus.

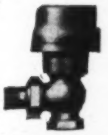
NATIONWIDE SERVICE. Johnson's own full time engineers and installation men are available at branch offices across the nation. Whether your problem involves a complete system or merely a single controller, take advantage of Johnson's nearly 70 years' experience in solving all types of control problems.

DIAPHRAGM VALVES FOR STEAM AND LIQUIDS

V-103 N.O. Globe Valve. ½" to 8" sizes. *Send for Bulletin V-103.*



V-153 Sylphon Diaphragm Valve for low pressure steam. Sizes ½" and ¾". *Send for Bulletin V-153.*



V-111 Sylphon Radiator Valve for low pressure steam. Sizes ½" to 2". *Send for Bulletin V-111.*

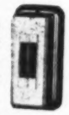
V-105 N.C. Globe Valve with V-510 Pilot Positioner. *Send for Bulletins V-105 and V-510.*

MASTER-SUBMASTER CONTROL FOR STEAM, LIQUIDS OR AIR

T-900 Remote Bulb Master Thermostat. *Send for Bulletin T-900.*

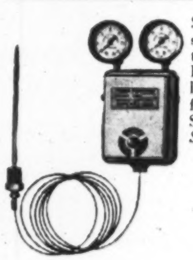
T-901 Remote Bulb Submaster Thermostat. *Send for Bulletin T-901.*

ROOM TYPE THERMOSTATS



T-403 Single Temperature Thermostat. *Send for Bulletin T-403.*

T-460 *Dual* Two-Temperature Thermostat. *Send for Bulletin T-460.*

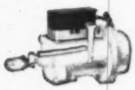


Series T-800 Thermostats for steam, liquids or air. Proportional or two-position action. Furnished with remote bulb for liquids or air; rigid stem models for insertion or immersion. Separable sockets available. *Send for Bulletin T-800.*

V-108 THREE-WAY MIXING VALVE for mixing liquids of varying temperatures. Thermostatically controlled. Sizes 2½" to 10". Rubber diaphragm. *Send for Bulletin V-108.*

PISTON OPERATORS

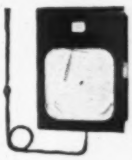
D-251 Long-Stroke Piston Operator.



Pilot Positioner Applied to Piston Damper Operator.

For dampers and similar uses. Compact unit with fully enclosed spring and rubber diaphragm. Adjustable stops. Available with pilot positioner for applications requiring maximum and precise repositioning power. Send for Bulletins D-251 and D-265.

RECORDING AND INDICATING CONTROLLERS FOR TEMPERATURE, PRESSURE, HUMIDITY



T-1000 RECORD-O-STAT. Records and controls. Built for extreme accuracy under all conditions. Single and two-pen models. Liquid-filled, vapor tension or gas-filled thermal systems. For ranges between minus 125°F. and plus 1000°F. Charts for 24 hours or 7 days. *Send for Bulletin T-1000.*

T-1050 INDICATING CONTROLLER For use where no permanent record is required. Easy-to-read scale permits accurate check of the controlled variable. Same measuring and control features as Record-O-Stats. *Send for Bulletin T-1000.*

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☐ V-103
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☐ V-510
☐ T-900
☐ T-901
☐ D-251
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☐ T-1000
☐ T-403
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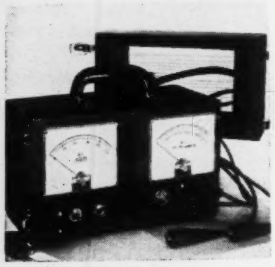
Test with confidence

WRITE FOR DATA SHEETS ON THE INSTRUMENTS SHOWN . . . ALL ARE STANDARD PRODUCTION MODELS, AVAILABLE FOR IMMEDIATE DELIVERY FROM STOCK . . . LET US QUOTE ON YOUR REQUIREMENTS FOR MODIFIED UNITS OR SPECIAL TEST EQUIPMENT.

SLAUGHTER CO.
PIQUA 3, OHIO

High-Voltage Leakage Tester

checks insulation for leakage
. . . grounds
. . . arcing



MODEL
122

16 lb. Portable for lab and field work

0/2100 V.A.C. . . . . 0/100/1000 MICROAMPS CAPACITY COMPENSATION . . . MEASURES A.C. RESISTANCE, CAPACITY, AND POWER FACTOR.

Precision Stroboscope

with high intensity daylight lamp
. . . stable
. . . accurate

MODEL
162

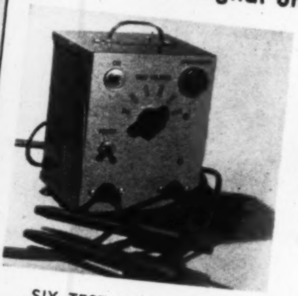
Interchangeable Heads . . . 0.1% accuracy

FOR SPEED MEASUREMENTS TO 30,000 RPM FOR MOTION STUDIES . . . CAN BE SYNCHRONIZED WITH EXTERNAL SIGNALS . . . CAN BE TRIGGERED WITH EXTERNAL CONTACTS . . . CAN BE COUPLED TO COUNTER, SCOPE, OR OTHER EQUIPMENT.

SLAUGHTER CO. • PIQUA 3, OHIO

High-Voltage Insulation Tester

with buzzer signal on breakdowns
. . . grounds
. . . shorts



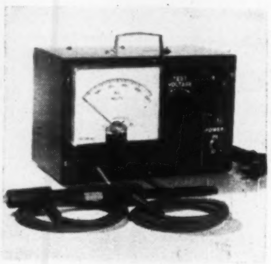
MODEL
101

Watch what you are doing . . . not the tester

SIX TEST VOLTAGES . . . 500 to 2500 V.A.C. PRICED SO YOU CAN AFFORD TO SPOT A FEW ALONG YOUR ASSEMBLY LINES. FOR SAFETY

Adjustable High-Voltage Tester

with buzzer signal on breakdowns
. . . grounds
. . . shorts



MODEL
106

Voltmeter shows actual Test Voltage

ADJUSTABLE VOLTAGES TO 2500 V.A.C. RECOMMENDED FOR BREAKDOWN TESTING AT FINAL ASSEMBLY AND INSPECTION.

High-Voltage Leakage Tester

audibly signals excess leakage
. . . grounds
. . . arcing

MODEL
103

Measures Leakage . . . not capacity current

TEST VOLTAGE ADJUSTABLE TO 2100 V.A.C. LEAKAGE LIMIT ADJUSTABLE . . . 0 TO 5 MA. DETECTS 20 MICROAMPERE ARCS . . . CANCELS CHARGING CURRENT CAUSED BY INHERENT CAPACITY. USED AT FINAL INSPECTION FOR BREAKDOWN AND LEAKAGE TESTS.

SLAUGHTER CO. • PIQUA 3, OHIO

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TESTERS, Altimeters, see Aircraft Instrument Testers

TESTERS, Condenser, see Capacitance Indicators (Electrical) or Boiler Room Instruments (Process)

TESTERS, Dead Weight, see Pressure Instrument Calibrators, Dead Weight

TESTERS, Dew Point, see Humidity Instruments

TESTERS, Fuel, see Gas Analyzers, Coal Testers, etc.

TESTERS, Hydrogen-Ion, see pH

TESTERS, Moisture, see Moisture, also Environmental Test

TESTERS, Mullen, see Bursting Testers

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Cady & Co.
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Custom Scient. Insts.
Davenport Mfg. Co.
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Electro Instr. Inc.
Electro Products Labs.
Ferner Co.
GE, Apparatus Sales
General Radio
Genisco Inc.
Hamner Electronics
Hathaway Instr. Co.
Heiland Div.
Hewson Co.
Isotope Products
Kinetic Instr. Co.
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Magnatran Inc.
Marion Electl. Instr.
Magnetic Analysis Corp.
Minco Products
Nuclear Research
Opad Electric
Peschel Electronics
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Ramo-Wooldridge
Robertshaw-Fulton
Sheffield Corp.
Simpson Electric
Slaughter Co.
Sperry Products
Stavid Engrg., Inc.
Sunshine Scientific
Sweets Co., Martin
Testing Machines, Inc.
Thwing-Albert
Tri-Tronics Co.
Triplett Electcl. Instr.
U. S. Testing Co.
Veeco Vacuum Corp.
Vibro-Ceramics

TESTERS, Oxygen, see Gas Analyzers

TESTERS, Piston Ring, see Dimensional Gages

TESTERS, Radio Set, see Circuit Analyzers

TESTERS, Radio Tube, see Tube Testers, Electron

TESTING INSTRUMENTS, Optical, see Optical Testing Instruments

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Custom Scient. Insts.
Daytronic Corp.
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Gates Electronic Co.
Genisco Inc.
Gilmore Industries
Gordon Co., Claud S.
Morehouse Mach. Co.
Olsen Testing Machine
Pittsburgh Inst. & Mach.
Rainhart Co.
Soiltest, Inc.
Steel City Testing Machs.
Testing Machines Inc.
Thwing-Albert

TESTING MACHINES, Bursting, see Bursting Testing Machines

TESTING MACHINES, Fatigue, see Fatigue

TESTING MACHINES, Glass Strain, see Glass Test

TESTING MACHINES, Gummed Tape, Paper, see Paper Test

TESTING MACHINES, High Pressure, see Bursting Testing Machines

TESTING MACHINES, Knit Goods, see Textile Testing

TESTING MACHINES, Leather, see Leather Testing

TESTING MACHINES, Miscellaneous, including Alternating Stress, Bending, Compression, Creep, Deflection, Ductility, Impact, Pendulum, Stiffness and Bending, Stretch, etc. (see also Testing Machines, Universal)

Airdraulics Engrg. Co.
All American Tool & Mfg.
Allegany Instr. Co.
Alpha Molykote
Amer. Instr. Co.
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Ames Prec. Machine
Amthor Testing
Analysis Sales
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Asch Equipment Co
Associated Testing Labs.
Bachcarach Indust. Instr.
Baldwin-Lima-Hamilton
Black & Decker
Bock Machine Co.
Boulin Instr. Corp.
Branson Instruments
Brush Assocs., G. F.
Brush Electronics
Buehler, Ltd.
Cambridge Instr. Co.
Carver, Fred S.
Central Scientific
Chapman Labs.
Chatillon & Sons
Clark Instrument Inc.
Consol. Electrodynamics
Control Devices
Custom Scient. Insts.
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Edwards, L. V.
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GE
Genisco Inc.
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King Tester Corp.
Krouse Testing Machine
L. A. B. Corp.
Lessels & Assocs.
Link Engrg. Co.
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Toledo Scale Co.
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U. S. Testing Co.
Universal Aviation
Vectron, Inc.
Wabash Metal Prods.
Whittington Pump

TESTING MACHINES, Paper, see Paper Testing

TESTING MACHINES, Pipe and Tube, see Pipe and Tube Testing Machines

TESTING MACHINES, Universal, Dead Weight Beam

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Baldwin-Lima-Hamilton
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Dillon & Co., W. C.
Ferner Co.
Gordon Co., Claud S.
Hacker & Co.
Ideal-Aerosmith
Jan Hardware Mfg Co.
Olsen Testing Machine
Refinery Supply
Riehle Testing Machines
Scott Testers, Inc.
Taller & Cooper
Testing Machines, Inc.
Thwing-Albert
Trerice Co., H. O.
Triner Scale & Mfg.

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Auto Control Labs.
Baldwin-Lima-Hamilton
Con Ray Corp.
Consolidated Avionics
Detroit Testing Mach.
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Steel City Testing Mach.
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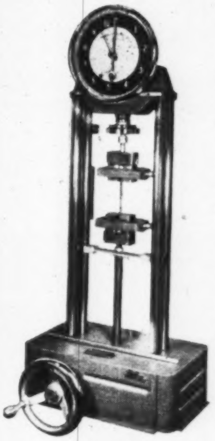
DILLON PRECISION PRODUCTS

ILLUSTRATED BELOW ARE A FEW OF THE MORE POPULAR DILLON INSTRUMENTS WHICH ARE IN USE IN LEADING PLANTS, BY SCHOOLS AND UNIVERSITIES AND BY MOST GOVERNMENTAL DEPARTMENTS. ALL ARE AVAILABLE FOR PROMPT SHIPMENT.



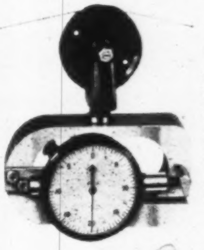
MODEL L UNIVERSAL TESTER

A high capacity universal tester for tensile, compression, transverse and shear work. Portable and easy to operate. For cloth, wire, springs, wood, metals, castings, plastics, etc.

Calibrated with elastic proving ring. Extreme accuracy. Available in 7 different capacities from as low as 0-250 lbs. up to 0-10,000 lbs. A 5" dia. or 10" dia. dial is optional.

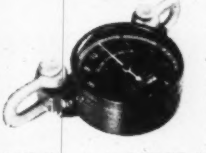
Handles standard round or flat specimens with ease and simplicity. Regular grips for flat specimens can be removed in seconds and replaced with any type of special gripping fixture.

Standard model is hand operated. Used on work bench. Can be supplied motorized to ASTM specs. if desired. America's finest low cost tester!



MECHANICAL FORCE GAUGE

This versatile instrument has unlimited application. For measuring mechanical, static or moving loads. Wide variety of adapting fixtures may be used with it. Illus. shows moving wire passing over pulley to indicate tension. 11 capacities. Jeweled dial indicator. From as low as 0-10 lbs. up to 0-50,000 lbs.



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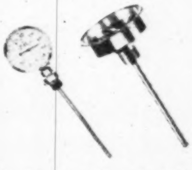
Ideal for shop, laboratory or field use in determining static loads or tensile strains on objects that are too large or cumbersome for conventional testing machines. Reads directly in lbs. Thirteen different capacities from as low as 0.500 lbs. up to 0-100,000 lbs. More than 100 different uses.



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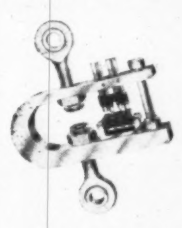
Accurate to 1% of the range over entire scale. Stainless steel construction. Large, easy-to-read dials 1", 2¼", 3" or 5" diameters. Wide variety of working ranges to suit every requirement in both Fah. and Centigrade. Provided with ½" or ¼" mounting nuts, and stem lengths from 3" up to 80". Special ranges or dial layouts to order. Also available in popular straight form.



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For automatic controlling of mechanical forces at various load points. Accurately controls motors, lights remote control signals, operates warning devices. Ideal safety device for overhead hoists. Available in tensile or compression. Furnished with from 1 to 4 adjustable switches for controlling forces at countless load points. 6 different ranges from 0-100 lbs. to 0-50,000 lbs. Protected against accidental overloading. Can be set for most critical accuracy.

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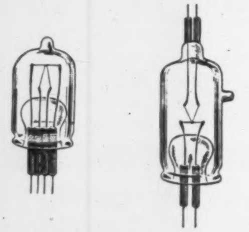

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Tuttle & Kift, Inc.
Uniform Tubes Inc.
U. S. Rubber
Viking Electric
Wabash Metal Prod.
West Instr. Corp.
Wheatstone Corp.
Wheelco Div.
Winslow Co.

THERMOCOUPLES, Base Metal (see also Wire, Thermocouple)

Aero Res. Instr. Co.
Aerotech Specialties
Airflo Instr. Co.
Assembly Products
Bacharach Indust. Instr.
Bailey Meter Co.
Barber Colman
Baso, Inc.
Bishop & Co., J.
Bristol Co.
Burlington Instr. Co.
Campbell Co., J. A.
Conax Corp.
Cybertronic Corp.
DeJur-Amsco
Dyna-Empire
Eitzen Co.; Louis Co.
Electro-Tech Equip.
Elematic Equipt. Corp.
Engelhard, Chas.
Fenwal, Inc.
Foxboro Co.
General Controls
GE, Apparatus Sales
Gordon Co., Claud S.
Gordon Machine & Tool
Hastings—Raydist
Huppert Co.
Illinois Testing Labs.
Indust. Pyrometer & Supply
Industrol Corp.
Instrument Lab., Inc.
J-B-T Instruments
Karn Chem. Equip.
Leeds & Northrup
Lewis Engrg. Co.
Loudon Div., Land-Air
Manning, Maxwell & Moore
Marshall Co., L. H.
Meters, Inc.
Minneapolis-Honeywell Indust. Div.
Pacific Scientific
Perkin-Elmer
Precision Tube Co.
Propulsion Devel. Labs.
Pyrometer Instr. Co.
Pyrometer Service Co.
Revere Corp. of Amer.
Richards Co., Arklay S.
Simpson Electric
Std. Tool & Mach. Co.
Taylor Instr. Cos.
Thermo-Electric Co.
Thermo-Prods. Co.
Thwing Albert
Trinity Equipt. Corp.
Uniform Tubes Inc.
United Optical
Viking Electric
West Instr. Corp.
Wheelco Instr. Div.
Winslow Co.

THERMOCOUPLES, Contact Type (see also Thermometers, Surface)

Aero Res. Instr. Co.
Airflow Instr. Co.
Amer. Thermo-Electric
Assembly Products
Bailey Meter Co.
Barber-Colman
Breeze Corporations
Bristol Co.
Cambridge Instr. Co.
Campbell Co., J. A.
Cannon Electric
DeJur-Amsco
Dyna-Empire
Electro-Tech Equip.
Elematic Equipt. Corp.
Engelhard, Charles
Epic, Inc.
Foxboro Co.
General Controls Co.
GE, Apparatus Sales
Gordon Co., Claud S.
Hickok Electcl. Instr.
Illinois Testing Labs.
Instrument Lab., Inc.
J-B-T Instruments
Lewis Engrg. Co.
Minneapolis-Honeywell Indust. Div.

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Trademark

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SCOTT TESTERS, INC.
166 Blackstone St., Providence, R.I.

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Thermocouples and Pyrometer Supplies

Get this new, free engineering handbook . . . on selection and application of thermocouples and pyrometer accessories

Complete, easy-to-use, 56-page compilation of Bristol's line of modern thermocouples and pyrometer accessories . . . tables of calibration data . . . PLUS illustrated catalog of the complete Bristol line of thermocouples, extension wire, protection tubes, insulators and accessories.

BRISTOL COMPANY

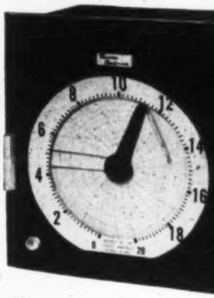
Write for your free copy of this 56-page Pyrometer Guide.

112 Bristol Rd., Waterbury 20, Conn.

For more information circle **354** on inquiry card.

PYROMETERS

T-E has combined advanced design with quality performance in a wide variety of pyrometric instruments.



Recording Controller

Indicators

Self-balancing, manual-balancing, millivoltmeter. Standard and portable.

Controllers

Indicating, signalling (transistorized), recording.

Recorders

Circular chart-indicating. Standard and portable.

Other T-E Instruments

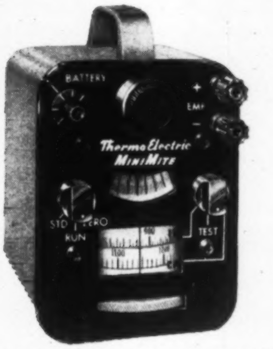
"AutoRef" providing single and multiple circuit cold-junction compensation • Temperature Monitoring Systems • Thermocouple Calibration Console • Resistance Thermometer Instruments.

Write for Instrument Bulletin FF-1

MINIMITE

PORTABLE INDICATOR

Null Balance, Potentiometer Type



This compact unit weighs under 4 lbs.—yet it has a 23½ inch double range scale. It can measure temperatures directly, when connected to a thermocouple, or calibrate other potentiometer or millivoltmeter-type instruments. Available scales cover temperatures from —300°F. to +3200°F. for all standard T/C materials; millivolt ranges from 0 to 62. Accurate to ¼ of 1% of scale range.

Also available as a Resistance Thermometer

Write for Bulletin 64-FF

Thermo Electric Co. Inc.
Saddle Brook, New Jersey
In Canada—Thermo Electric (Canada) Ltd., Brampton, Ont.

For more information circle **355** on inquiry card.

Phen-Trols, Inc.
Precision Tube Co.
Propulsion Devel. Labs.
Pyrometer Instr. Co.
Pyrometer Service Co.
Revere Corp. of Amer.
Richards Co., Arklay S.
Rowe Engrg. Co.
Sensitive Res. Instr.
Simpson Electric
Temperature Engrg.
Thermo-Couple Prods.
Thermo-Electric Co.
Thermo-Prods. Co.
Thwing-Albert
Tipp-Tronic, Inc.
Trerice Co., H. O.
Trinity Equipt. Corp.
Ultradyne Engrg. Co.
Uniform Tubes, Inc.
Viking Electric
West Instr. Corp.
Wheelco Instr. Div.
Winslow Co.

THERMOCOUPLES, Immersion

Aero Res. Instr. Co.
Aerotech Specialties
Airflo Instr. Co.
Autoclave Engrs.
Barber-Colman
Bristol Co.
Dyna-Empire, Inc.
Electro-Tech Equip.
Elematic Equipt. Corp.
Epic, Inc.
Gordon Co., Claud S.
Harco Labs.
High Pressure Equip.
Huppert Co.
Illinois Testing Labs.
Instrument Lab., Inc.
Leeds & Northrup
Lewis Engrg. Co.
Marshall Co., L. H.
Minneapolis Honeywell Industr. Div.
Propulsion Devel. Labs.
Pyrometer Instr. Co.
Revere Corp. of Amer.
Richards Co., Arklay S.
Std. Tool & Mach. Co.
Taylor Instr. Cos.
Temperature Engrg.
Thermo-Couple Prods.
Thermo Electric Co.
Thermo-Prods. Co.
Thwing-Albert
Trerice Co., H. O.
Trinity Equipt. Corp.
Tuttle & Kift, Inc.
West Instr. Corp.

THERMOCOUPLES, Rare Metal, including Platinum (see also Wire, Thermocouple)

Aero Res. Instr. Co.
Airflo Instr. Co.
Amer. Platinum Works
Baker & Co., Inc.
Barber-Colman
Bishop & Co., J.
Bristol Co.
Electro-Tech Equip.
Foxboro Co.
GE Apparatus Sales
Gordon Co., Claud S.
Harco Labs.
Huppert Co.
Illionis Testing Labs
Leeds & Northrup
Lewis Engrg. Co.
Minneapolis-Honeywell Indust. Div.
Richards Co., Arklay S.
Taylor Instr. Cos.
Thermo-Couple Prods.
Thermo Electric Co.
Thermo-Prods. Co.
Thwing-Albert
Tipp-Tronic, Inc.
Trinity Equipt. Corp.
Tuttle & Kift, Inc.
West Instr. Corp.

THERMOCOUPLES, Separate Heater Type

Aero Res. Instr. Co.
Amer. Thermo-Electric
Barber Colman
Breeze Corporations
Bristol Co.
Campbell Co., J. A.
Dyna-Empire
Electro-Tech Equipt. Co.
Electron-Radar
General Controls Co.
GE
General Radio Co.
Gordon, Claud S.
Harco Labs.
Illinois Testing Labs.
Lewis Engrg. Co.
Sensitive Res. Instr.
Temperature Engrg.
Thermo Electric Co.
Thermo-Prods. Co.
Tuttle & Kift, Inc.
Ultradyne Engrg. Co.
Vacuum Tube Prods.
West Instr. Corp.
Wheelco Instr. Div.

THERMOCOUPLES, Vacuum

Amer. Thermo-Electric
Barber-Colman
Beckman Instruments
Biddle Co., James G.
Cambridge Instr. Co.
Consolidated Vacuum Corp.
Distillation Products
Farrand Optical
Fredericks Co., George
GE-Apparatus Sales
General Radio Co.
Gordon Co., Claud S.
Harco Labs
Hastings-Raydist
Hickok Electcl. Instr.
High Vacuum Equipt. Corp.
National Research
Perkin-Elmer
Phen-Trols Inc.
Philadelphia Scientific
Pyrometer Instr. Co.
Rawson Electcl. Instr.
Sensitive Res. Instr.
Smith Co., Arthur F.
Temperature Engrg.
Thermo-Electric Co.
Thermo-Prod. Co.
Trinity Equipt. Corp.
Ultradyne Engrg.
Universal X-Ray Prods.
Vacuum Tube Products Co.
Wheelco Instr. Co.

THERMO-HYDROMETERS, see Hydrometers, Thermo

THERMOMETER TEST WELLS, see Thermowells

THERMOMETER TESTERS, see Temperature Calibration

THERMOMETER TUBES, see Thermowells

THERMOMETERS, Dial, Bimetal

Bacharach Indust. Instr.
Dillon & Co., W. C.
Electro-Tech Equip.
Garden City Instruments
Germanow-Simon Mach. Co.
Hiergesell & Sons
LaPine & Co.
Manning, Maxwell & Moore
Marsh Corp., Jas. P.
Marshall Instr., Inc.
Marshalltown Mfg.
Moeller Instr. Co.
Pacific Transducer
Palmer Thermoms., Inc.
Prec. Therm. & Insts.
Rochester Mfg. Co.
Sarco Co.
Scientific Instr. Co.
Seegers Mfg. Co.
Sticht Co., Herman H.
Swift & Anderson
Taylor Instr. Cos.
Testing Machines, Inc.
Thermom. Corp. of Amer.
Trerice Co., H. O.
Weksler Thermom. Corp.
Weston Electcl. Inst.

THERMOMETERS, Dial, Gas, Mercury, Organic Liquids filled, or Vapor-pressure

Bacharach Indust. Instr. Co.
Bristol Co.
Dickson Company
Elect. Auto-Lite Co.
Fischer & Porter Co.
Foxboro Co.
Garden City Instruments
Hill & Co., E. Vernon
Johnson Service Co.
Kimble Glass Co.
Kontes Glass
Liquidometer Corp.
Manning, Maxwell & Moore
Marsh Corp., Jas. P.
Marshalltown Mfg.
Minneapolis-Honeywell Indust. Div.
Moeller Instr. Co.
Palmer Thermometers, Inc.
Partlow Corp.
Philadelphia Thermom. Co.
Powers Regulator Co.
Republic Flow Meters
Scientific Instr. Co.
Seegers Mfg. Co.
Taylor Instrument Co.
Trerice Co., H.O.
United Instr. Co.
U.S. Gauge Div.
Weksler Thermom. Corp.
Weston Elect. Inst.

THERMOMETERS, Electrical Resistance, Indicating, Recording and/or Controlling

Ace Glass, Inc.
Advanced Insts.
Amer. Instr. Co.
Am. Temperature Ind.
Arnoux Corp.
Assembly Products
Associated Research
Autron Engrg., Inc.
Avionic Products
Bailey Meter Co.
Barber-Colman
Bendix-Friez
Bogue Elect. Mfg.
Bristol Co.
Burlington Instr. Co.
Cambridge Instr. Co.
Chicago Indust. Instr.
Cleveland Fuel Equipt.
De-Jur-Amsco
Edison, Inc., Thomas A.
Electric Auto-Lite
Electro-Mec Lab.
Electro-Tech Equip.
Engelhard, Chas.
Fielden Instr. Div.
Fisher Scientific
Foxboro Co.
General Controls
GE, Apparatus Sales
G-M Labs.
Giannini & Co.
Gordon Co., Claud S.

THERMOCOUPLES

MINIATURE

Iron-Constantan
Copper-Constantan
Chromel-Alumel
Platinum-Rhodium-Platinum

GASKET
BAYONET
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EXPOSED LOOP
PROTECTED
SHIELDED
STAGNATION

Aircraft Miniature Thermocouples, harnesses, connectors and extension wires, including "MIL" spec types, for turbo and reciprocating engines. Thermocouples designed for airborne or test stand use.

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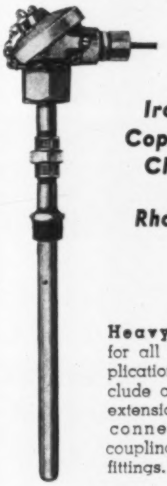
HEAVY DUTY INDUSTRIAL



Iron-Constantan
Copper-Constantan
Chromel-Alumel
Platinum-Rhodium-Platinum

WIRE
TUBULAR

Heavy Duty thermocouples for all industries and all applications. Accessories include a complete selection of extension wires, terminals, connection heads, quick-coupling connectors and fittings.

PROTECTION TUBES
THERMO WELLS

Available in all commercial materials for all industries. Both built-up and bar stock.

Write for Thermocouple Catalog CFF

Thermo Electric Co. Inc.
Saddle Brook, New Jersey
In Canada—
Thermo Electric (Canada) Ltd., Brampton, Ont.

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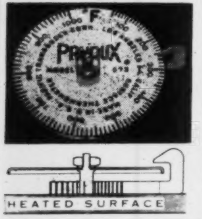
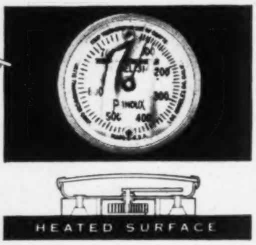
Easy TO OBTAIN SURFACE TEMPERATURES UP TO *1000°F*
with PANDUX® SURFACE TEMPERATURE THERMOMETERS



PANDUX® Spot-Chek Thermometer

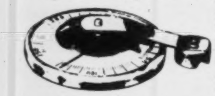
ALL STAINLESS STEEL 50° F. to 1000° F. Easy to read—fast—compact. Accuracy to ± 2% for all surface temperatures such as dies, hot plates, etc. Also for ovens and other enclosed spaces. User can reset, if necessary. Diameter 1¾", weight ⅓ oz. Model 573 with magnet clamp....**$4.00.**

PANDUX Hi-Heat



Designed for fast, accurate check of all hot surfaces from 50° F. to 750° F., for hot plates, platens, dies, molds, ovens, furnaces — either flat or rounded surfaces. Thermometer is affixed by two Alnico magnets. Highly practical in a wide variety of industrial applications — sells for $6.75.

PANDUX Surface Thermometer



Standard with industry for easy measurement of surface temperature, compact, low cost, accurate ± 2° over entire range. Three ranges: −50° F. to 250° F., 0° F. to 300° F., 70° F. to 370° F. Also in Centigrade. Price $6.75.

ALSO PANDUX PIPE THERMOMETERS

Your order will be filled through your nearest dealer. WRITE DEPT AH7

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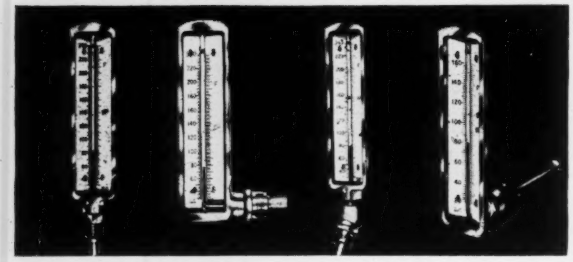
Albert A. WEISS
INDUSTRIAL THERMOMETERS
ACCURATE · READABLE · DURABLE



THREE-QUARTERS OF A CENTURY OF SPECIALIZATION IN INDUSTRIAL THERMOMETERS FOR ALL INDUSTRIES

WEISS THERMOMETERS are made of • Sturdy one piece cast bronze cases in "silver-green" finish • Protective glass front with patented feature for easy removal and cleaning • Red-reading mercury tube • Individually engraved scales enameled on brass stock for accurate calibration and easy reading.

WEISS THERMOMETERS are made in all forms: straight, right side and left side angles, reclined and inclined angles, with stems and connections to fit almost any need.

Write for colorful and comprehensive catalog and price list.

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THERMOMETERS

ALBERT A. WEISS & SON, INC.
ESTABLISHED 1882
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BROOKLYN 5, NEW YORK

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Gray Instr. Co.
Green, Henry J.
Greiner Co., Emil
Hays Corp.
Hickok Electcl. Instr.
Illinois Testing Labs.
Industrial Instr. Corp.
Instrument Associates
J-B-T Instruments
Johnson Service Co.
Kahl Scientific
Larson Instr. Co.
Leeds & Northrup
Lewis Engrg. Co.
Littlefuse, Co.
Liquidometer Corp.
Loudon Insts. Div.
Mac Donald Co., W. S.
Magnetic Controls
Manning, Maxwell & Moore
Martin-Decker Corp.
Mason-Nielan Div.
Minneapolis-Honeywell
  Indust. Div.
Mira Scientific
Moeller Instr. Co.
Pacific Scientific
Pacific Transducer Corp.
Penn Insts. Div.
Philadelphia Scientific
Philadelphia Thermom. Co
Phoenix Prec. Instr.
Propulsion Devel. Labs.
Pyrometer Instr. Co.
Robertshaw-Fulton
Roller-Smith
Rubicon Co.
Ruge Assocs., Arthur C.
Scientific Glass App.
Scientific Instr. Co.
Shallcross Mfg. Co.
Shand & Jurs Co.
Simpson Electric
Stewart, M. C.
Swartwout Co.
Swieco, Inc.
Technical Equipt. Co.
Tell-Tronics Prods.
Thermo-Electric Co.
Thermometer Corp.
Thwing-Albert
Trans-Sonics, Inc.
Trerice Co., H. O.
Triplett Electcl. Instr.
United Control Corp.
United Optical
Victory Engrg. Co.
Wagner & Son
Webber Gage Co.
Weiler, Paul G.
Weksler Thermom. Corp.
West Instr. Corp.
Weston Electcl. Instr.
Wheelco Instr. Div.
Winslow Co.

THERMOMETERS, Dial, Gas, Mercury, Organic Liquids filled, or Vapor-pressure

Bacharach Indust. Instr. Co.
Bristol Co.
Dickson Company
Elect. Auto-Lite Co.
Fischer & Porter Co.
Foxboro Co.
Garden City Instruments
Hill & Co., E. Vernon
Johnson Service Co.
Kimble Glass Co.
Kontes Glass
Liquidometer Corp.
Manning, Maxwell & Moore
Marsh Corp., Jas. P.
Marshalltown Mfg.
Minneapolis-Honeywell
  Indust. Div.
Moeller Instr. Co.
Palmer Thermometers, Inc.
Partlow Corp.
Philadelphia Thermom. Co.
Powers Regulator Co.
Republic Flow Meters
Scientific Instr. Co.
Seegers Mfg. Co.
Taylor Instrument Cos.
Trerice Co., H. O.
United Instr. Co.
U. S. Gauge Div.
Weksler Thermom. Corp.
Weston Elect. Inst.

THERMOMETERS, Indicating, Glass, including Mercury, Spirit

Ace Glass, Inc.
Accurate Inst. Co.
Accuracy Scient. Instr.
Bacharach Indust. Instr.
Bar-Ray Products
Bendix-Friez
Bristol Co.
Central Scientific
Century Instr. Co.
Electric Hotpack Co.
Ever Ready Thermometer
Fish-Schurman
Fisher Scientific
Fleischhauer & Son
G. M. Mfg. Co.
Garden City Instruments
General Scient. Equipt.
Goetz Niemer Co.
Gordon Co., Claud S.
Gotham Instr. Div.
Green, Henry J.
Greiner Co., Emil
Griebel Co., E.
H-B Instr. Co.
Hiergesell & Sons
Hill & Co., E. Vernon
Johnson Service Co.
Kahl Scientific
Kessler Co.
Kimble Glass
King Engrg. Co.
Kontes Glass
LaPine & Co.
Manning, Maxwell & Moore
Martin & Co.
Microchemical
Minneapolis-Honeywell
Moeller Instr. Co.
Nurnberg Thermometer
Owens-Illinois Glass Co.
Palmer Thermometers
Paulstick & Sons
Philadelphia Scientific
Philadelphia Thermom. Co.
Phoenix Prec. Instr.
Precision Scientific
Prec. Therm & Insts.
Rascher & Betzold
Refinery Supply
Ruttco Mfg. Co.
Scientific Glass App.
Scientific Instr. Co.
Seedburo Equipment
Seely Instr. Co.
Simpson Electric
Stortz, John L.
Superior Meter Co.
Swift & Anderson
Taylor Instr. Cos.
Temp. Engrg. Co.
Thermom. Corp. of Amer.
Trerice Co., H. O.
United Instr. Co.
U. S. Gauge Div.
Wagner & Son
Weiss & Son, Albert A.
Weksler Thermom. Corp.
Weston Electcl. Instr.

THERMOMETERS, Indicating, Pressure-spring

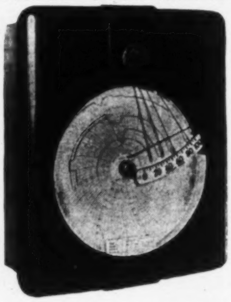
Acme Gauge
Bacharach Indust. Instr.
Bailey Meter Co.
Bar-Ray Products
Bristol Co.
Century Instr. Co.
Defender Instr. & Reg.
Dickson Company
Dillon & Co., W. C.
Elect. Auto-Lite Co.
Foxboro Co.
Garden City Instruments
Gordon Co., Claud S.
Gotham Instr. Div.
Industrial Instr. Corp.
Kahl Scientific Instr.
Liquidometer Co.
Manning, Maxwell & Moore
Marshalltown Mfg. Co.
Marsh Corp., Jas. P.
Mason-Nielan Div.
Minneapolis-Honeywell
Moeller Instr. Co.
Moore Products
Nurnberg Thermom. Co.
Palmer Thermometers
Partlow Corp.
Penn Insts. Div.
Philadelphia Thermom. Co.
Powers Reg. Co.
Preferred Utilities Mfg.
Republic Flow Meters
Rochester Mfg. Co.
Sarco Co., Inc.
Scientific Instr. Co.
Seegers Mfg. Co.
Standard Thermometer
Taylor Instr. Cos.
Testing Machines, Inc.
Thermometer Corp.
Trerice Co., H. O.
United Instr. Co.
Weksler Thermom. Corp.
Welch Scientific
Weston Electcl. Instr.

THERMOMETERS, Maximum and Minimum Registering

Accuracy Scient. Instr.
Bacharach Indust. Instr.
Bendix-Friez
Bristol Co.
Electric Auto-Lite
Electro-Physics Co.
Ever Ready Thermometer
Fisher Scientific
Fleischhauer & Son
Foxboro Co.
G. M. Mfg. Co.
Garden City Instruments
General Scientific Equipt.
Gordon Co., Claud S.
Gostham Instr.
Green, Henry J.
Greiner Emil
H-B Instr. Co.
Hiergesell & Sons
Instruments Corp.
Kahl Scientific Instr.
Kessler Co., Walter
Kimble Glass Co.
Larson Instr. Co.
Lewis Engrg. Co.
Manning, Maxwell & Moore
Marshall Instr., Inc.
Martin & Co.
Moeller Instr. Co.
Nurnberg Thermom. Co.
Pacific Transducer Corp.
Palmer Thermometers
Partlow Corp.
Philadelphia Scientific
Philadelphia Thermom. Co.
Prec. Therm. & Insts.
Rochester Mfg. Co.
Scientific Glass App.
Scientific Instr. Co.
Seedburo Equipt. Co.
Taylor Instr. Cos.
Thermom. Corp. of Am.
Trerice Co., H. O.
Wagner & Son
Weksler Thermom. Corp.
Weston Electcl. Instr.

THERMOMETERS, Recording and/or Controlling, Filled Systems

Alden Products



BAILEY

Resistance Thermometer

• Platinum resistance temperature element measures −400F to + 1200F; transmits to precalibrated "plug-in" type receivers in Bailey a-c PYROTRON Receiver Recorder.

One to four continuous temperature records are made on a single 12 in. circular chart. Each recording pen responds instantly since it is controlled by a separate inertia-free electronic detector. Each detector has its own power supply. A small reversible electric motor balances the a-c Wheatstone bridge circuit, and drives the indicating, recording, and controlling features. The Bailey a-c PYROTRON Receiver Recorder may be furnished with pneumatic or electrical control.

Any combination of electrically or pneumatically transmitted factors may be combined with temperature in the same recorder which features continuous, one-year, automatic inking.

Request Product Specification E12-5 for Receiver Recorder and E51-6 for Resistance Temperature Elements and Protecting Wells.

BAILEY METER COMPANY
1041 IVANHOE ROAD CLEVELAND, O
Bailey Meter Company Ltd. Montreal Canada

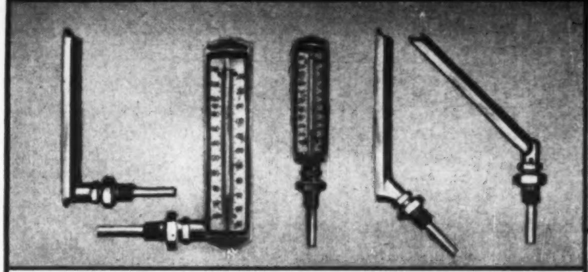
For more information circle **359** on inquiry card.

MOELLER INSTRUMENT COMPANY

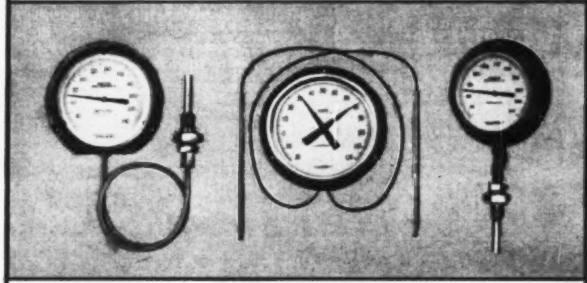
SINCE 1867

132nd STREET & 89th AVENUE, RICHMOND HILL, NEW YORK, N.Y., U.S.A.

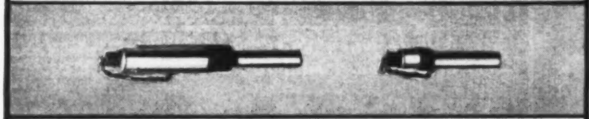
Representatives in Principal Cities



MOELLER INDUSTRIAL THERMOMETERS made in all forms, Straight, Angle, Right Side Angle, Left Side Angle, Reclined and Inclined Angles, in scale ranges from minus 120 to plus 1125°F. or its equivalent in centigrade. Available in 5″, 7″, 9″ and 12″ scale sizes with plain stems, union connection stems and separable sockets in all stem lengths and alloys.



DIAL INDICATING THERMOMETERS, Mercury Actuated, made in 4½″, 6″ and 8½″ sizes with flexible extension tubing. Adjustable rigid stems, single or two pointers, plain bulb, union connection bulb or separable sockets in all lengths and alloys. Scale ranges from minus 40 to plus 1000°F. or its equivalent in centigrade.



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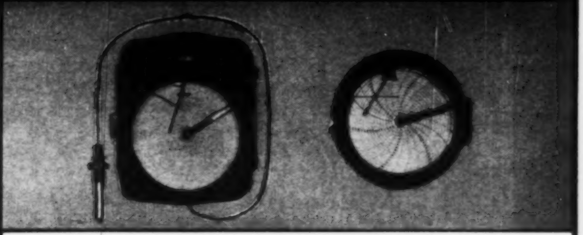
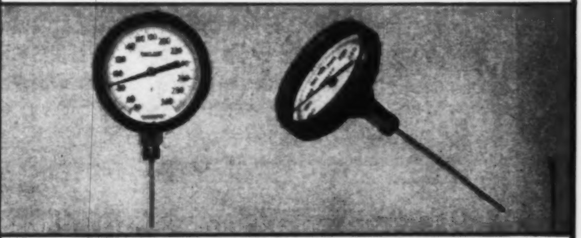
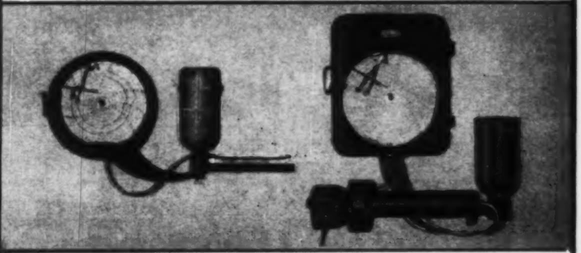
ENGRAVED STEM and PORCELAIN and PAPER SCALE THERMOMETERS made in ranges from minus 150 to plus 1125°F. or its equivalent in centigrade. Available in standard and extreme precision grade. Made to meet specifications of the Government, A.S.T.M. and other authoritative bodies.



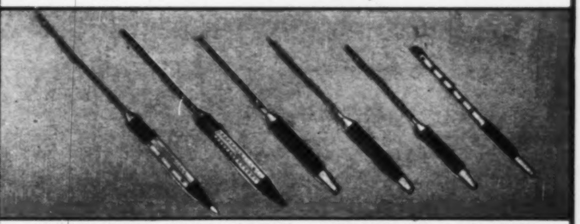
RECORDING THERMOMETERS, Mercury Actuated, made in the round or rectangular cases. Charts 10″ or 12″, 1 hour, 12 hour, 24 hour or 7 day. Ranges from minus 40 to plus 1000°F. or its equivalent in centigrade. Made in remote reading, direct reading, portable and self contained styles. Plain stems, union connection stems and separable sockets in all stem lengths and alloys.



MOELLER BIMET THERMOMETERS are actuated by a powerful, specially processed bi-metal helix. Made in 5″ and 3″ diameter case size. Rigid stainless steel stem, can be furnished with union connection stem and separable socket in all alloys. Scale ranges from minus 100 to 1000°F or equivalent in centigrade.



RECORDING PSYCHROMETERS, Mercury Actuated. Round and Rectangular Case, 12 hour, 24 hour or 7 day charts, self contained or remote reading, with or without motor driven fan.



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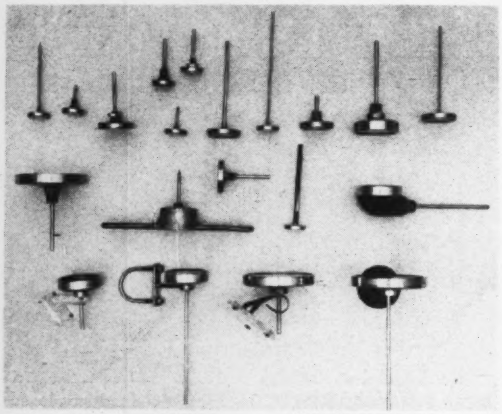
Stainless Steel
DIAL THERMOMETERS



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A choice of Fahrenheit ranges from —100F to 1000F and Centigrade ranges from —10C to 530C are avialable in 1½", 2¼", 3" and 5" diameter dial sizes, with stem length from 3" to 84".

Leading Manufacturers of Special Dial Thermometers

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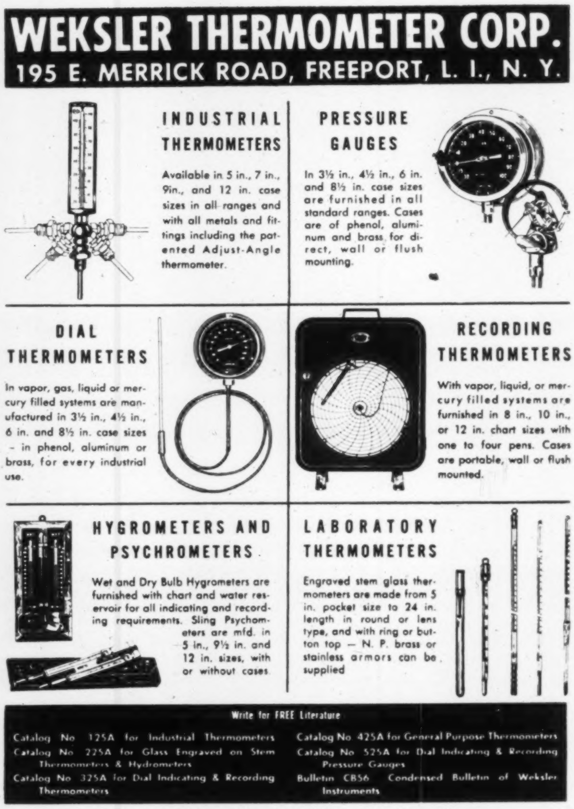

WEKSLER THERMOMETER CORP.
195 E. MERRICK ROAD, FREEPORT, L. I., N. Y.

INDUSTRIAL THERMOMETERS

Available in 5 in., 7 in., 9in., and 12 in. case sizes in all ranges and with all metals and fittings including the patented Adjust-Angle thermometer.

PRESSURE GAUGES

In 3½ in., 4½ in., 6 in. and 8½ in. case sizes are furnished in all standard ranges. Cases are of phenol, aluminum and brass for direct, wall or flush mounting.

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In vapor, gas, liquid or mercury filled systems are manufactured in 3½ in., 4½ in., 6 in. and 8½ in. case sizes – in phenol, aluminum or brass, for every industrial use.

RECORDING THERMOMETERS

With vapor, liquid, or mercury filled systems are furnished in 8 in., 10 in., or 12 in. chart sizes with one to four pens. Cases are portable, wall or flush mounted.

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Engraved stem glass thermometers are made from 5 in. pocket size to 24 in. length in round or lens type, and with ring or button top — N. P. brass or stainless armors can be supplied

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Bristol Series 500 Thermometers, the product of over 69 years of instrument-making experience, feature the latest developments in instrument engineering.

In manufacturing hundreds of thousands of recording and automatic controlling thermometers, The Bristol Company has developed a variety of models, sizes, and temperature ranges to fill every requirement.

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BRISTOL COMPANY
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PALMER a great name in thermometers

PALMER "DIRECT DRIVE" 3½" DIAL THERMOMETER

An outstanding improvement in mercury actuated dial thermometers with external calibration feature.

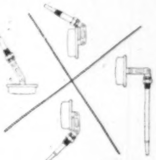
- No Sector
- No Pinion
- No Linkage
- Accuracy
- Readability
- Angularity

Case . . . stainless steel, compensated for ambient temperature, external calibrating feature. Cover . . . clear plastic, gasket-sealed to stainless steel back-plate. Actuation . . . direct drive Bourdon coil. (No sector, pinion or linkage.) Stem . . . ½" diameter stainless steel, standard lengths: 4"—6"—8"—12", multiples of 6" up to 60" max. . . . Fittings . . . separable socket, union connection (½" or ¾" NPT), flange union.

PALMER 4½" DIAL THERMOMETER

Adaptable and interchangeable with all Industrial Thermometer applications.

MERCURY-ACTUATED. Guaranteed accuracy. Size: 4½" Dial.

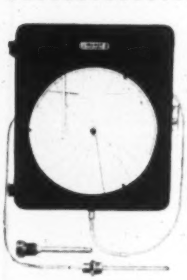


Designed for use as STRAIGHT or any ANGLE. With clear vision all-glass moulded case and metal back. Fittings: Plain, Union, Socket; adjustable or union Flanges.

STANDARD RANGES:

−30+130°F.	1°	0+300°F.	2°	0+600°F.	5°
0+150°F.	1°	0+400°F.	5°	+200+750°F.	5°
0+240°F.	2°	0+500°F.	5°	+200+950°F.	5°

or equivalent °C—no extra charge

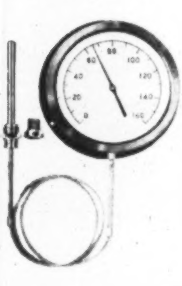


RECORDING and DIAL THERMOMETERS

With Flexible Tubing Connection.

Mercury-actuated, for extreme accuracy. Sturdy construction, very sensitive. All parts rust-proof. Stainless-steel bulb. Wall or Flush Mounting. Bottom or Back connection. Fittings: Plain, Union, Sep. socket; Adj. or Union Flanges.

Ranges: −40 to 1000°F. (or C).



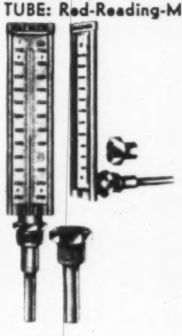
RECORDER: 12" die-cast alum. case; Black or white, satin or wrinkle finish; elec. or spring clock; 12 hr., 24 hr., or 7-day charts. One-pen or multiple pens. Also Fully compensated to correct for Ambient Temperature.

DIAL: 6" and 8" round case. Black or white finish. Easy-reading dial.

INDUSTRIAL THERMOMETERS with "Red-Reading-Mercury"

CASE: 7", 9" or 12" Extruded brass. Wide scale. Chrome finish.

TUBE: Red-Reading-Mercury Easy to Read. Thoroughly annealed for permanent accuracy. Protected by double-strength glass shield. Graduated scale.



Straight

FITTINGS: Fixed thrd., Union, Sep. Socket; adjustable or union Flange; parallel thrd. & locknut; special fttgs. to order.

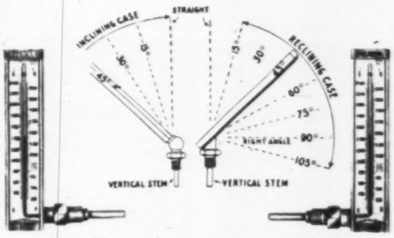
STEM: STRAIGHT and Misc. ANGLES. 3½" to 60", incl. thread.

THREAD: ¾" or 1" NPT (½" not recom.)

STANDARD RANGES:

−40+110°F	2°	+ 50+400°F	5°
0+100°F	1°	+100+550°F	5°
+30+180°F	2°	+200+750°F	5°
+30+240°F	2°	+200+950°F	5°
+30+300°F	2°		

Plain Mercury. Borosilicate tube. Centrigrade equiv.—no extra. Spec. Ranges—cost more.



Right Side

Left Side

SMALL CASE THERMOMETERS

4" case ⅜" & ½" Fixed Thrd. Fttg.

6" case: ½" & ¾" Sep. Socket Fttg.

Extruded case. Durable Nickel finish.

"Red-Reading-Mercury". Guaranteed accurate.

LABORATORY AND PRECISION THERMOMETERS

All glass engraved mercury tube, with vivid RED column. Round or lens; Ring or button top; With or without metal armor; Total or partial Immersion (3" standard). Each in sep. box. All ranges: up to 750°F. (or C. equiv.).

Plain mercury. Borosilicate tube. +200+950°F. Special ranges & dimensions to order. Fractional division, A.S.T.M. etc.

Also handy 5" Pocket style. Annealed and guaranteed very accurate.

REPAIRS—To all makes of mercury Industrial Thermometers. With "Red-Reading-Mercury" (no extra cost) and new Extruded Brass case included. Guaranteed accurate. Reasonable price.

PALMER THERMOMETERS, INC.

Mfrs. of Industrial Laboratory, Recording and Dial Thermometers

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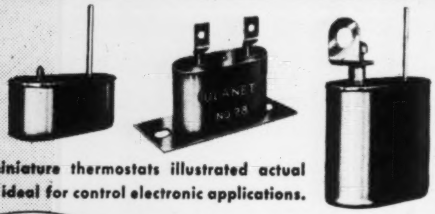
HERMETICALLY SEALED
THERMOSTATS



These miniature thermostats illustrated actual size are ideal for control electronic applications.

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ELECTRIC HEAT CONTROL ENGINEERS

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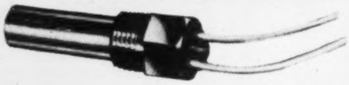

Series FM Thermostats offer the only unit that can withstand mechanical clamping or pinching without effect on set calibration.

● The Ulanet catalog, illustrating and describing the worlds' largest line of precision thermostats is available without obligation. Write on your letterhead.

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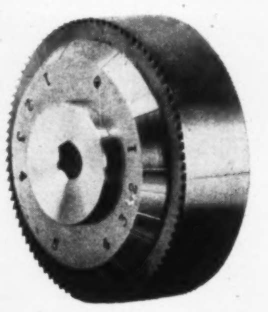

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Potter Instr. Co.
Racine & Co., Jules
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TIME SWITCHES, see Switches, Time

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TIMERS, Miscrosecond (see also Counters, EPUT)

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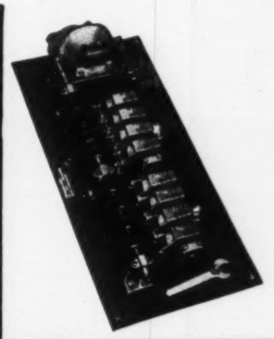

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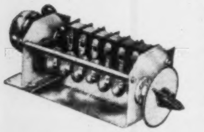

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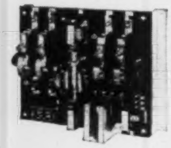

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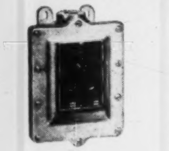

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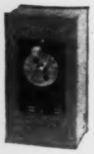

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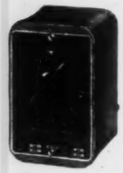

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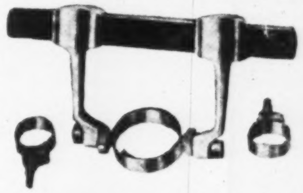

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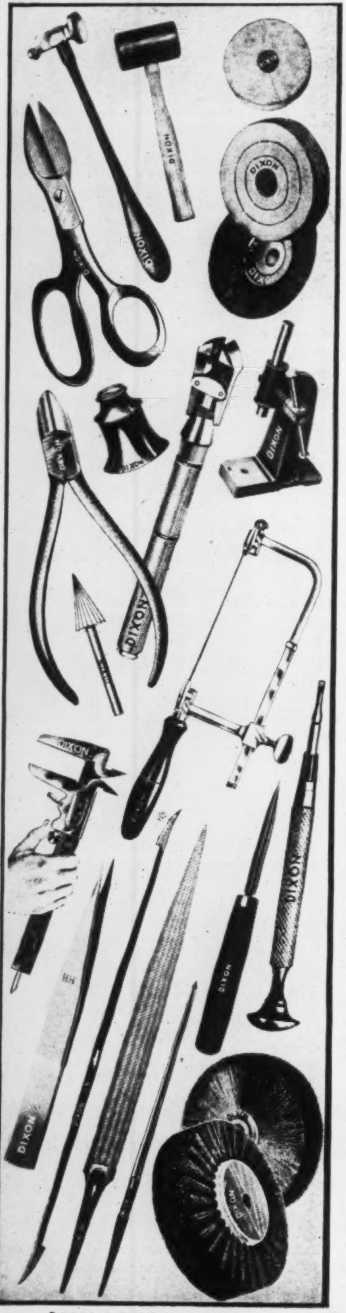
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Baldwin-Lima-Hamilton
Chatillon & Sons
Crescent Engrg. & Res. Co.
Dillon & Co., W. C.
Donner Scientific
Federal Products
Fielden Instr. Co.
GE
Gilmore Industries
Gyroscopics, Inc.
Hathaway Instr. Co.
Herman, Victor George
Industrial Electronics
Internat. Devel. Co.
Jensen Tool Co., H. C.
Jo-Line Tools
Link Engrg. Co.
Metron Instr. Co.
Pelouze Mfg. Co.
Revco, Inc.
Riehle Div.
Ruge Assocs., Arthur C.
Schaevitz Engineering
Statham Labs.
Sturdy Tool & Gage
Sturtevant Co.
Taller & Cooper Inc.
Taylor Instr. Cos.
Tensitron, Inc.
Toledo Scale
U. S. Gauge Div.
Waters Mfg., Inc.

TORQUE MEASURING EQUIPMENT, including Dynamometers (Hydraulic, Hydraulic Tension, Pull Rod, Rotary Absorption, Transmission.)

Aero Electronics
Airdraulics Engrg. Co.
Allegany Instr. Co.
Ann Arbor Instr. Works
Asch Equipt. Co.
Avion Div.
B & F Instrs.
Baldwin-Lima-Hamilton
Bendix Aviation Corp.
Boulin Instr. Corp.
Bristol Co.
Brush Electronics
Buehler, Ltd.
Cameron Iron Works
Chatillon & Sons
Clark Mfg. Co.
Colman Instr. & Mfg.
Colvin Labs.
Conoflow Corp.
Control Engrg. Co.
Cosa Corp
Crescent Engrg. & Res. Co.
Dillon & Co., W. C.
Dynamatic Corp.
Electro-Mech. Div.
Emery Co., A. H.
Ercona Corp.
Falcon Machine & Tool
Flight Research Inc.
Foxboro Co.
GE, Apparatus Sales
Gilmore Industries
Graphite Metallizing
Gyroscopes, Inc.
Hagan Chem. & Controls
Hamilton Watch
Hathaway Instr. Co.
Hayes Scient. Apps.
Humphrey Inc.
Industrial Electronics
Indust. Engrg. Corp.
Jo-Line Tools
Kahn & Co.
Karl-Douglas Assoc.
Kellog Switchboard
L. A. B. Corp.
Link Engrg. Co.
Livermont, Inc.
Martin-Decker Corp.
Martin-Hubbard Corp.
Mid-West Dynamometer
Minn.-Honeywell, Boston
Monsell, J. R.
Nankervis Co., G. L.
Olsen Testing Machine
Orban Co., Kurt
Pitometer Log Corp.
Polyphase Instr. Co.
Radiation Inc.
Revco Inc.
Reliance Elect. & Engrg.
Richmont, Inc.
Riehle Div.
Rubicon Co.
Ruge-de Forest, Inc.
Saxl Instr. Co.
Schaevitz Engineering
Scherr Co., Inc.
Seederer-Kohlbusch
Skyway Prec. Tool
Statham Labs.
Stoelting Co., C. H.
Sturtevant Co.
Sunshine Scientific
Superdraulic Corp.
Swedish Gage Co.
Taller & Cooper
Task Corp.
Taylor Dynamometer
Testing Machines, Inc.
Thwing-Albert
Trimount Instr. Co.
Vectron Inc.
Waters Mfg. Co.
Western Gear
Westinghouse Electric
Wiancko Engrg. Co.

TORQUE WRENCHES, see Wrenches, Torque

TORSIOGRAPHS, see Torsion Meters

TORSION METERS

Aero Electronics
Airdraulics Engineering
Baldwin-Lima-Hamilton
Boulin Instr. Corp.
Chatillon & Sons
Commercial Research
Epic Inc.
Falcon Machine & Tool
Hamilton Watch
Hathaway Instr. Co.
Riehle Testing Machines
Saxl Instrument
Sturtevant Co.
Tensitron, Inc.
Toledo Scale Co.

TOTALIZERS, Demand

Amer. Meter Co.
Berkeley Div.
Esterline-Angus
Fischer & Porter
GE, Apparatus Sales
Landis & Gyr
Leeds & Northrup
Maxson Instr. Div.
Sangamo Electric
Westinghouse Electric

TOTALIZERS, Electric Energy

Autocall Co.
Autom. Electric
Bristol Co.
Engrg. & Research Corp.
Esterline-Angus
GE, Apparatus Sales
Landis & Gyr
Leeds & Northrup
Radiation Instr. Dev. Lab.
Sangamo Electric
Stewart Instr. Co.
Streeter-Amet.
Westinghouse Electric

TOTALIZERS, Fluid Flow and/or Gas Flow, see Flow Totalizers

TOTALIZERS, Running Time, see Time Recorders

TRAFFIC SIGNALING DEVICES

A'G'A' Div.
Airborne Instruments
Amglo Corp.
Autom. Electric
Autom. Temp. Control Co.
Bullard Co.
Eagle Signal Corp.
Eastern Industries, Inc.
Emarco Corp.
GE, Apparatus Sales
Kemlite Labs.
Natl. Time & Signal
Photoswitch, Inc.
Reynolds Electric
Sangamo Electric
Taller & Cooper, Inc.

TRAMMELS, Steel Beam

Brown & Sharpe
Lufkin Rule Co.
Starrett Co.

TRANSDUCERS. Note: A transducer converts one form of POWER into another. For numerous primary measuring devices see the correct headings under the measurables, e.g. Displacement Pickups. Flow Pickups, Pressure Pickups, etc.

TRANSDUCERS, Ultrasonic

AiResearch Mfg. Co.
Andersen Labs.
Arenberg Ultrasonic Lab.
Atlantic Research
Atlas Engrg. Co.
Audio Develop.
Bendix-Pacific
Bendix, Pioneer-Central
Branson Instruments
Brush Electronics
Centralab Div.
Chesapeake Instr. Corp.
Consol. Electrodynamics
Corbett Science Labs.
Defiance Engrg. & Merwave
Dyna-Empire
Electronics Co.
Electro-Mec Lab.
Electro Prods. Labs.
Endevco Corp.
Fischer & Porter Co.
GE, Appartus Sales
Gen. Precision Lab.
General Ultrasonics Co.
Gulton Industries
Hewlett-Packard
Knights Co., James
Laboratory for Electronics
Leonard Inc., Wallace O.
Massa Labs.
Maxson Instr. Div.
Monsell, J. R.
McKenna Labs.
Moore Corp., John B.
Natl. Aircraft Corp.
Potter Aeronaut. Corp.
Premier Res. Labs.
Raytheon Mfg. Co.
Reed Res. Inc.
Rutico, Inc.
Sangamo Electric
Servomechanisms, Inc.
Smith Prods., Graydon
Sperry Products
Task Corp.
Telex, E-A Div.
Trenton Trans. Corp.
Valpey Crystal Corp.
Vibro-Ceramics

TRANSFORMERS, Adjustable, see Transformers, Variable

TRANSFORMERS, Constant Voltage (see also Voltage Regulators)

Acme Electric
Aircraft Transformer
Airdesign Inc.
Airpax Products
Allied Radio Corp.
Allis-Chalmers
Altec Lansing
Amplifier Co.
Amplifier Corp. of Amer.
Atlas Engrg. Co.
Avion Div.
Basler Electric
Better Coils & Trans.
Boonton Radio
California Magnetic
Carad Corp.
Chicago Electronic
Chicago Std. Transf. Corp.
Colin Campbell Co.
Cutler Hammer
Dano Electric
Davis & Co., Inc., Dean
Del Electronics Co.
Dormeyer Industries
Electronic Transf. Co.
Electrosig Corp.
Federal Telephone
GE, Apparatus Sales
General Controls
General Radio
Goslin Electcl. & Mfg. Co.
Gramer-Halldorsen Trans.
Green Rectifier Co.
Hevi Duty Electric Co.
Jeffries Transf. Co.
Keystone Products
Laboratory Equip.
Magnatran Inc.
Magnetic Amplifiers Inc.
Magnetic Instr. Co.
Magnetic Res. Corp.
Martin & Co.
Microtran Div.
Natl. Aircraft Corp.
New London Instr. Co.
Newark Electric Co.
Osborne Electric Co.
Pacific Transducer Corp.
Peerless Div., Altec
Perkin Engrg. Co.
Ransom Electric Co.
Raytheon Mfg. Co.
Reed & Reese
Sola Electric
Sorensen & Co.
Square D Co.
Standard Elect. Prods.
Standard Transf. Corp.
Sterling Transf. Corp.
Superior Electric
Sylania Elect. Prods.
Tartak Electronics
Thermador Electcl.
Thordarson-Meissner
Timely Insts. & Conts.
Tracerlab Inc.
Transformer Engineers
Transformers, Inc.
Trenton Transf. Corp.

BERKSHIRE PULSE TRANSFORMERS
Types PT-82, PT-91, PT-100

Of interest to designers of radar equipment, television test equipment and to all engineers who work with pulses.

Types PT-82 and PT-91 are similar in appearance to Type PT-100, being miniature plug-in units, with aluminum shell ¾" in diameter and 1½" long. Each has four windings, the number of turns in each winding being 82 in PT-82 and 91 in PT-91. Transformers are encapsulated in epoxy.

Tested in a typical blocking oscillator circuit, the following approximate values were obtained:

TYPE	PULSE PEAK VOLTS	PULSE DURATION Meas. at 50% of peak. MICROSECONDS
PT-82	70	1.1
PT-91	80	1.2
PT-100	90	1.3

The price of either type f.o.b. Greenville is $9.10. The price of PT-100 has also been reduced to $9.10.

Sample package, designated SP-90, is a plastic box containing one each of PT-82, PT-91 and PT-100, available at $21.50

LABTRANS PULSE TRANSFORMER

Mod.	Imp.	Rise Time	Percent Droop 1µs	2µs	10µs	Price
PT-1	100	.04µs	20	50	80	$8.95
PT-1E encapsulated						10.90
PT-2	100	.04µs	20	30	70	8.95
PT-3	120	.03µs	20	40	75	5.95
PT-100 9-pin noval						10.00

SP-1 Kit of one each of PT-1, PT-2 and PT-3, transformers $18.75

BERKSHIRE LABSTROBE

For checking speed of motors, machines, turntables. Flashes 60 times a second.

Chromed case, reflector, 6 ft. cord $9.95

BERKSHIRE LABORATORIES
710 Bank Village, Greenville, N. H.

For more information circle **377** on inquiry card.

FOR THE FINEST
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call or write
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SEPULVEDA CALIFORNIA
EMpire 2-0761

For more information circle **378** on inquiry card.

United States Electronics
United Transf. Corp.
Varo Mfg. Co.
Virginia Electronics
WacLine, Inc.
Westinghouse Electric

TRANSFORMERS, Differential, see Displacement Pickups, Differential Transformer

TRANSFORMERS, High Frequency

Acme Electric
Acro Products
Adler Electronics
Aircraft Transf. Corp.
Altec Lansing
Atlas Engrg. Co.
Audio Devel. Co.
Avion Div.
Basler Electric
Caddell-Burns Mfg.
Calif. Magnetic Cont. Corp.
Cambridge Thermionic
CGS Labs.
Chicago Electronic Engrg.
Chicago Stand. Transf.
Colin Campbell Co.
Communication Access.
Del Electronics Co.
Dietz Design & Mfg.
Electronic Transformer Co.
Filtron Co., Inc.
Freed Transf. Co.
Ferranti Electric
GE, Apparatus Sales
Goslin Elect. & Mfg. Co.
Keystone Products
Lear, Inc.
Levinthal Electronic Prods.
Magnatran Inc.
Maxson Instr. Div.
Mico Instr. Co.
Microphase Corp.
Microtran Div.
Moran Electronic Comp.
Natl. Aircraft Corp.
North Hills Elect.
Osborne Electric
Polyphase Instr. Co.
Raytheon Mfg. Co.
Reed & Reese
Sangamo Electric
Spellman Television
Spencer-Kennedy Labs.
Sterling Transf. Corp.
Superior Elect.
Texas Instruments
Thermador Electcl. Mfg. Co.
Transformer Engrs.
Trenton Transf. Corp.
Triad Transf. Corp.
United States Electronics
United Transf. Corp.
Virginia Electronics
Wirt Company

TRANSFORMERS, Impedance

Acme Electric
Acro Products
Adler Electronics
Aircraft Transf. Corp.
Airpax Products
Atlas Engrg. Co.
Audio Devel. Co.
Avion Div.
Ballastran Corp.
Basler Electric
Better Coil & Transf.
Blonder-Tongue Labs.
Caledonic Electron & Transf.
Calif. Magnetic Cont. Corp.
Carad Corp.
CGS Labs.
Chapman Labs.
Chicago Std. Transf. Corp.
Colin Campbell Co.
Communication Access. Co.
Del Electronics Co.
Dietz Design & Mfg.
Dittmore & Freimuth
Dyna-Empire
Electrical Windings
Electronic Transf. Co.
Femco, Inc.
Ferranti Electric
Freed Transf. Co.
GE, Apparatus Sales
General Controls
General Radio
Goslin Elect. & Mfg. Co.
Gramer-Haldorsen
Hansen Electronics
Hevi Duty Electric
Hycon Electronics
Hycor Div.
Keystone Products
Langevin Mfg. Co.
Magnavox Co.
Magnetic Instr. Co.
Mechaponents Div.
Merit Transf. Corp.
Mico Instr. Co.
Microtran Div.
Muirhead Instrument
Natl. Aircraft Corp.
New London Instr. Co.
N. Y. Transf. Co.
NYT Electronics, Inc.
Osborne Electric
PCA Electronics
Polyphase Instr. Co.
Raytheon Mfg. Co.
Sangamo Electric
Sorensen & Co.
Southw. Ind. Electronics
Sperry Gyroscope
Standard Transf. Corp.
Sterling Transf. Corp.
Sylvania Elect. Prods.
Telex, Inc.
Tarkak Electronics
Thermador-Electcl. Mfg.
Thordarson-Meissner
Torwico Electronics, Inc.
Transformer Engrs.
Transformers, Inc.
Trenton Transf. Corp.
Triad Transf. Corp.
United States Electronics
United Transf. Corp.
Varo Mfg. Co.
Virginia Electronics

TRANSFORMERS, Input Output, and Interstage, including AF, IF, and RF

Aeronox Corp.
Acme Electric
Acro Products Co.
Airpax Products
Altec Lansing Corp.
Amplifier Corp. of Amer.
Atlantic Transf. Div.
Atlas Engrg. Co.
Audio Devel. Co.
Avion Div.
Basler Electric
Better Coil & Transf.
Caledonia Electronics
Calif Magnetic Cont. Corp.
Cambridge Thermionic
Carad Corp.
Carol Electronics
Chicago Std. Transf. Corp.
Colin Campbell Co.
Communication Access. Co.
Del Electronics Co.
Dietz Design & Mfg.
Dittmore-Freimuth Corp.
Dormeyer Industries
Dormitzer Elect. & Mfg.
Electrical Windings
Electronic Transf. Co.
Essex Electronics
Ferranti Electric
Filtron Co., Inc.
Freed Transformer
GE, Apparatus Sales
General Instr. Co.
General Radio
General Transf. Co.
Gordos Corp.
Goslin Elect. & Mfg. Co.
Gramer Transf. Corp.
Gudeman Co.
Halldorson Transf. Co.
Harder Co., Donald C.
Hevi-Duty Electric
James Vibrapowr Co.
Kenyon Transf. Co.
Keystone Products
Lab. for Electronics
Lear, Inc.
Lenkurt Electric Co.
Magnavox Co.
Maxson Instr. Div.
Mechaponents Div.
Microtran Div.
Millen Mfg. Co.
Muirhead Instrument
Munston Mfg. & Service
NYT Electronics, Inc.
Natl. Aircraft Corp.
National Co.
New York Transformer

NEW!
DC to DC and DC to AC solid-state power converters voltage regulated, frequency controlled, for missiles, telemetering, gyros, servos

INTERELECTRONICS VOLTAGE REGULATED INTERVERTER POWER SUPPLY

Interelectronics Interverter solid-state thyratron-like elements and magnetic components convert DC to any number of voltage regulated or controlled frequency AC or filtered DC outputs from 1 to 1800 watts. Light weight, compact, 90% or better conversion efficiency.

Ultra-reliable in operation, no moving parts, unharmed by shorting output or reversing input polarity. Complies with MIL specs for shock, acceleration, vibration, temperature, RF noise.

Now in use in major missiles, powering telemetering transmitters, radar beacons, electronic equipment. Single and polyphase AC output units now power airborne and marine missile gyros, synchros, servos, magnetic amplifiers.

Interelectronics — first and most experienced in the DC input solid-state power supply field, produces its own solid-state gating elements, all magnetic components, has the most complete facilities and know-how—has designed and delivered more working KVA than any other firm!

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2432 GR. CONCOURSE, N. Y. 58, N. Y.

For more information circle **379** on inquiry card.

SUBMINIATURE TRANSFORMER

Field Tested—used with transistors by leading manufacturers in large quantities.

NEW!

400 cps Servo transformer-Sub-Miniature Size
Spec. Pri. 10,000ct
Sec. 500
ac power: 12.5 watt ¾" x 1" x 1" #427
ac power: 6.25 watt ¾" x 1" x ¾" #414
Pri. unbalance dc: ± 4ma

60 cps Isolation transformer-Sec. ct
Spec. Output 115 v. 3.0 mw ¾" x 1" x 1" #608
Enclosed: any manner

Special requisition will be constructed within two weeks.

Transistor Transformer Sizes For Hearing Aid, Radio and Automation on Stock
#F-2010 = .263 x .410 x .325
#O-T560 = .245 x .376 x .325
#M-340 = Still Smaller

Frank Kessler Co., Inc., 41-45 47th St., L.I.C. 4, N. Y. Tel: Stillwell 4-0263

For more information circle 380 on inquiry card.

High Voltage Transformers & Power Supplies

Design - Development - Manufacture

- High Voltage Power Supplies for Laboratory and Industrial Use.
- Complete Line of High Voltage Transformers in Stock.
- Saturable Reactors, Charging Chokes, Filament Transformers.
- Oil, Air, Epoxy, Mil-T-27
- Miniature to 15 KVA • Up to 150,000 Volts • All Frequencies.

DEL Electronics Corp.

521 Homestead Ave. Mount Vernon, N.Y.
OWENS 9-3232

For more information circle 381 on inquiry card.

Newark Electric Co.
North Hills Elect.
Osborne Electric Co.
Peerless Div., Altec
Polyphase Instr.
Pulse Engrg., Inc.
Raytheon Mfg. Co.
Reed & Reese
Sangamo Electric
Sickles Div.
Southw. Ind. Electronics
Standard Elect. Prods.
Sterling Transf. Corp.
Sylvania Elec. Prods.
Tartak Electronics
Tech. Material Corp.
Telex, Inc.
Texas Instruments
Thermador Electcl. Mfg.
Texas Instruments
Torwico Electronics
Transformer Engrs.
Transformers, Inc.
Trenton Transf. Corp.
Triad Transf. Corp.
United States Electronics
United Transf. Corp.
Virginia Electronics
Westinghouse Elect.
Weston Electcl. Instr.
Wirt Company
Wheeler Insul. Wire, Inc.

TRANSFORMERS, Instrument, including Current, and/or Potential, Laboratory

Acme Electric
Acro Products
Aircraft Transf. Corp.
Airdesign, Inc.
Airpax Products
Allied Control Co.
Allis-Chalmers
Altec Lansing Corp.
Amplifier Co.
Annis Co., R. B.
Asch Equipt. Co.
Assembly Products
Associated Research
Atlantic Transf. Div.
Atlas Engrg. Co.
Audio Devel. Co.
Avion Div.
Ballastran Corp.
Basler Electric
Bendix, Eclipse-Pioneer
Bendix-Friez
Better Coil & Transf.
Bristol Co.
Burlington Instr. Co.
Burrell Corp.
Calif. Magnetic Cont. Corp.
Carad Corp.
Central Scientific
Chapman Labs.
Chicago Electronic Engrg.
Chicago Transformer
Clough Brengle Co.
Columbia Elect. Mfg.
Communication Access. Co.
Computer Engrg.
Control Corp.
Daven Co.
Davenport Mfg.
Daystrom Instrument
Del Electronics Co.
Dietz Design & Mfg.
Dinion Coil Co.
Dittmore & Freimuth
Dormeyer Industries
Eastern Specialty Co.
Electrical Windings
Electro-Tech Equip. Co.
Electro Voice, Inc.
Electronic Transformer Co.
Electronics, Inc.
Electrosig Corp.
Essex Wire Corp.
Esterline-Angus
Federal Telephone & Radio
Ferranti Electric
Freed Transformer
GE, Apparatus Sales
General Controls
General Radio
General Winding
Gorrell & Gorrell
Goslin Electric & Mfg.
Gramer-Halldorson
Hevi-Duty Electric
Hickok Electcl. Instr.
Industrial Insts. Inc.
Instrument Labs
Kenyon Transformer
Keystone Products
Knopp Inc.
Laboratory Equipt. Corp.
Langevin Mfg. Corp.
Lenkurt Electric
Magnetic Instr. Co.
Manning, Maxwell & Moore
Maxson Instr. Div.
Mechaponents Div.
Merit Transf. Corp.
Mico Instr. Co.
Microtime Labs.
Microtran Div.
Miller Transformer
Millivac Instruments
Mt. Sopris Instr. Corp.
Natl. Aircraft Corp.
NJE Corp.
New London Instr. Co.
New York Transf. Co.
Newark Electric Co.
Nothelfer Winding Labs.
Nuclear Measmts. Corp.
Osborne Electric
PCA Electronics
Peerless Div., Altec
Perkin Engrg. Co.
Phen-Trols, Inc.
Physics Res. Labs.
Raytheon Mfg. Co.
Roller-Smith
Sangamo Electric
Servomechanisms, Inc.
Scientific Glass App.
Sierra Electronic Corp.
Simpson Electric
Sola Electric
Sorensen & Co.
Southw. Ind. Electronics
Specialties Inc.
Sperry Gyroscope
Square D Co.
Std. Elect. Prods.
Std. Science Supply
Std. Transf. Corp.
Sterling Transf. Corp.
Stitcht Co.
Superior Electric
Sylvania Elect. Prods.
Tartak-Electronics
Texas Insts., Inc.
Thermador Electcl. Mfg. Co.
Thordarson-Meissner
Torwico Electronics
Transformer Engrs.
Transformers, Inc.
Trenton Transf. Corp.
United Optical
United States Electronics
United Transf. Corp.
Universal Scientific
Varo Mfg. Co.
Virginia Electronics
Westinghouse Electric
Weston Electcl. Instr.

TRANSFORMERS, Insulation Testing

Acme Electric
Aircraft Transf. Corp.
Airdesign, Inc.
Airpax Products
Associated Research
Atlas Engrg. Co.
Avion Div.
Ballastran Corp.
Basler Electric
Beta Electric Corp.
Better Coils & Transfs.
Campbell Electric
Chapman Labs.
Chicago Electronic
Davenport Mfg.
Del Electronics
Electronic Transf. Co.
Ferranti Electric
Freed Transf. Co.
General Controls
GE, Apparatus Sales
Goslin Electric & Mfg. Co.
Gramer-Halldorson
Hevi-Duty Electric
Keystone Products
Knopp Inc.
Langevin Mfg. Corp.
Lenkurt Electric
Magnatran Inc.
Magnetic Instr. Co.
NJE Corp.
NYT Electronics
New Jersey Electronics
New York Transformer
Newark Electric Co.
Opad Electric
Peschel Electronics
Precise Measmts. Co.
Scient. Inst. Dev. Lab.
Sherron Metallic
Slaughter Co.
Spellman TV Corp.
Standard Transf. Corp.
States Co.
Sterling Transf. Corp.
Superior Electric
Thermador Electcl. Mfg.
Thordarson-Meissner
Transformer Engineers
Transformers, Inc.
Trenton Transf. Corp.
Triad Transf. Corp.
United Transf. Corp.
Virginia Electronics

TRANSFORMERS, Isolation

A'G'A Div.
Acme Electric
Acro Products
Airpax Products
Altec-Lansing
Assembly Products
Atlantic Transf. Div.
Atlas Engrg. Co.
Audio Devel. Co.
Avion Div.
Basler Electric
Beta Electric
Better Coil & Transf.
Calif. Magnetic Cont. Corp.
Chicago Electronic Engrg.
Chicago Std. Transf. Corp.
Coast Coil Co.
Colin Campbell Co.
Communication Access.
Del Electronics
Dietz Design & Mfg.
Dormeyer Industries
Electrical Windings
Electronic Transf. Co.
Ferranti Electric
Freed Transf. Co.
GE, Apparatus Sales
General Transformer
Goslin Electric & Mfg. Co.
Gramer-Halldorson
Green Rectifier Co.
Hevi Duty Elec. Co.
Kenyon Transf. Co.
Keystone Products
Magnatran Inc.
Magnavox Co.
Mechaponents Div.
Microtran Div.
NJE Corp.
NYT Electronics, Inc.
Natl. Aircraft Corp.
New York Transformer
Opad Electric
Osborne Electric
Peerless Div., Altec
Std. Electcl. Prods.
Sterling Transf. Corp.
Texas Insts., Inc.
Thermador Electcl. Mfg. Co.
Torwico Electronics
Transformer Engrs.
Transformers, Inc.
Trenton Transf. Corp.
Triad Transf. Corp.
United States Electronics
United Transf. Corp.
Viking Electric
Virginia Electronics
Westinghouse Electric
Wheeler Insul. Wire, Inc.

TRANSFORMERS, Microwave

Acme Electric
Aircraft Transf. Corp.
Altec Lansing
Atlas Engrg. Co.
Audio Devel. Co.
Avion Div.
Basler Electric
Better Coil & Transfs.
Cambridge Thermionic
Carad Corp.
Chicago Std. Transf. Corp.
Defiance Engrg. & Merwave
DeMornay-Bonardi
Electronic Transf. Co.
F. R. Machine Works
Freed Transf. Co.
G.E., Apparatus Sales
Goslin Electric & Mfg. Co.
Gramer-Halldorson
Hevi-Duty Electric
Hewlett-Packard
Hycon Mfg. Co.
Indus. Rectifier Devices
Kearfott Co.
Keystone Products
Lectronic Res. Labs.
Magnatran Inc.
Maxson Corp., W. L.
Microphase Corp.
Narda Corp.
Natl. Aircraft Corp.
Polytechnic Res. & Devel.
Raytheon Mfg. Co.
Sperry Gyroscope
Sorensen & Co.
Sterling Transf. Corp.
Sylvania Elec. Prods.
Thordarson-Meissner
United Transf. Corp.
Vectron, Inc.
Viking Electric
Wheeler Insul. Wire.

TRANSFORMERS, Phasing

Acme Electric
Aircraft Transf. Corp.
Airdesign, Inc.
Altec Lansing
Atlas Engrg. Co.
Audio Develop.
Avion Div.
Ballastran Corp.
Basler Electric
Better Coil & Transfs.
California Magnetic
Chapman Labs.
Chicago Ltd. Transf. Corp.
Colin Campbell Co.
Del Electronics
Eastern Spec. Co.
Electronic Transf. Co.
Esterline-Angus
Freed Transformer Co.
GE, Apparatus Sales
Goslin Electric & Mfg. Co.
Gramer-Halldorson
Hevi-Duty Electric
Hycon Electronics
Keystone Products
Langevin Mfg. Corp.
Magnatran Inc.
Magnetic Instr. Co.
Merit Transf. Corp.
Mico Instr. Co.
Microtran Co.
NYT Electronics, Inc.
Natl. Aircraft Corp.
New York Transf. Co.
Opad Electric
Osborne Electric
PCA Electronics
Raytheon Mfg. Co.
Reed & Reese
Sangamo Electric
Southw. Ind. Electronics
States Co.
Sterling Transf. Corp.
Thermador Electcl. Mfg.
Thordarson-Meissner
Torwico Electronics
Transformer Engs.
Transformers, Inc.
Trenton Transf. Corp.
United Transf. Corp.
Varo Mfg. Co.
Viking Electric
Virginia Electronics
Westinghouse Electric

TRANSFORMERS, Power

AMP, Inc.
Acme Electric
Acro Products
Aircraft Transf. Corp.
Airdesign, Inc.
Airpax Products
Allied Control Co.
Allis-Chalmers
Altec-Lansing
Amplifier Corp. of Amer.
Atlantic Transf. Div.
Atlas Engrg. Co.
Audio Devel. Co.
Avion Div.
Ballastran Corp.
Basler Electric
Bendix, Eclipse-Pioneer
Better Coil & Transfs.
Caledonia Electronics
Calif. Magnetic Cont. Corp.
Chapman Labs.
Chicago Electronic Engrg.
Chicago Std. Transf. Corp.
Colin Campbell Co.
Comar Electric
Communication Access. Co.
Del Electronics
Dietz Design & Mfg.
Dittmore & Freimuth
Dormeyer Industries
Dormitzer Elect. & Mfg. Co.
Electrical Windings
Electronic Res. Assocs.
Electronic Transf. Co.
Federal Telephone & Radio
Femco, Inc.
Ferranti Electric
Freed Transf. Co.
Gates Electronic Co.
General Controls
GE, Apparatus Sales
Goslin Elect. & Mfg. Co.
Gramer-Halldorson
Green Rectifier Co.
Harder Co., Donald C.
Harvey Radio Labs.
Hevi-Duty Electric Co.
Hycor Div.
I.T.E. Circuit Breaker
James Vibrapowr Co.
Kenyon Transf. Co.
Keystone Products
Lab. for Electronics
Land-Air, Inc.
Langevin Mfg. Corp.
Lenkurt Electric
Lindberg Engrg. Co.
Macarr, Inc.
Magnavox Co.
Magnetic Amplifiers Inc.
Magnetic Instr. Co.
Mechaponents Div.
Merit Transf. Corp.
Microtran Div.
Mt. Sopris Instr. Corp.
Muston Mfg. & Service
NJE Corp.
NYT Electronics, Inc.
Natl. Aircraft Corp.
National Controls
National Spectrographic
New London Instr. Co.
New York Transformer
Oltronix Co.
Opad Electric
Osborne Electric
PCA Electronics, Inc.
Perfex Corp.
Perkin Engineering
RCA Tube
Raytheon Mfg. Co.
Sangamo Electric
Sciaky Bros., Inc.
Servo Corp.
Sola Electric
Soreng Products
Sorensen & Co.
Southw. Ind. Electronics
Square D Co.
Standard Transf. Corp.
Sterling Transf. Corp.
Sylvania Elect. Prods.
Tartak Electronics, Inc.
Texas Insts., Inc.
Thermador Electcl. Mfg. Co.
Thordarson Meissner
Torwico Electronics
Transformer Engrs.
Transformers, Inc.
Trenton Transf. Corp.
Triad Transf. Corp.
United States Electronics
United Transf. Corp.
Varo Mfg. Co.
Vibration Research Labs.
Viking Electric
Virginia Electronics
Westinghouse Electric
Wheeler Insul. Wire

TRANSFORMERS, Pulse

AMP, Inc.
Acme Electric
Acro Products
Aerovox Corp.
Aircraft Transf. Corp.
Airpax Products
Altec-Lansing
Alto Scientific
Atlantic Transf. Div.
Atlas Engrg. Co.
Audio Devel. Co.
Avion Div.
Basler Electric
Berkeley Div.
Berkshire Labs.
Better Coil & Transf.
Burroughs Electronics
Caledonia Electronics
Calif. Magnetic Cont. Corp.
Carad Corp.
Chicago Std. Transf. Corp.
Colin Campbell Co.
Communication Access. Co.
Del Electronic Co.
Detectolab, Inc.
Dietz Design & Mfg.
Dilectron Div.
Dormeyer Industries
DuMont Labs., Allen B.
ESC-Corp.
Electronic Transf. Co.
Epsco, Inc.
Essex Electronics
Filtron Co., Inc.
Freed Transf. Co.
GE, Apparatus Sales
Gordos Corp.
Goslin Elect. & Mfg. Co.
Gramer-Halldorson
Gudeman Co.
Hevi-Duty Electric
Hycor Company
Jacobs Instr. Co.

Kenyon Transf. Co.
Keystone Products
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Levinthal Electronic Prods.
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Magnetic Instr. Co.
Magnetic Res. Corp.
Microtran Div.
NJE Corp.
NYT Electronics, Inc.
Natl. Aircraft Corp.
New York Transformer
North Hills Electric
Osborne Electric
PCA Electronics
Packard Bell-Electrns. Div.
Pearson Electronics
Peerless Div., Altec
Polyphase Instr. Co.
Pulse Engrg., Inc.
Ransom Research
Raytheon Mfg. Co.
Reed & Reese
Sangamo Electric
Sprague Electric
Sterling Transf. Corp.
Sylvania Elec. Prods.
Tech. Material Corp.
Technitrol Engrg. Co.
Tektronix, Inc.
Telex, E-A Div.
Texas Insts., Inc.
Thermador Electcl. Mfg. Co.
Thordarson-Meissner
Transformer Engrs.
Transformers, Inc.
Trenton Transf. Corp.
Triad Transf. Corp.
Underwood Corp.
United States Electronics
United Transf. Corp.
Valor Electron. Comps.
Viking Electric
Virginia Electronics
Westinghouse Electric
Wheeler Insul. Wire, Inc.

TRANSFORMERS, Saturable, see Amplifiers, Magnetic

TRANSFORMERS, Split Core

Acro Products Co.
Aircraft Transformer
Airdesign, Inc.
Airpax Products
Allied Radio
Altec-Lansing
Annis Co., R. B.
Assembly Products
Atlas Engrg. Co.
Audio Devel. Co.
Avion Div.
Ballastran Corp.
Basler Electric
Better Coil & Transfs.
Bristol Co.
Calif. Magnetic Cont. Corp.
Carad Corp.
Chapman Labs.
Chicago Electronic
Chicago Std. Transf. Corp.
Colin Campbell Co.
Communication Access.
Del Electronics
Dietz Design & Mfg.
Electronic Transf. Co.
Esterline-Angus
Freed Transf. Co.
GE, Apparatus Sales
Goslin Elect. & Mfg. Co.
Gramer-Halldorson
H-D Elect. Co.
Hevi-Duty Electric
Kenyon Transf. Co.
Keystone Products
Knopp Inc.
Langevin Mfg. Corp.
Magnavox Co.
Magnetic Amplifiers Inc.
Magnetic Instr. Co.
Mechaponents Div.
Microtran Div.
NYT Electronics, Inc.
Natl. Aircraft Corp.
National Spectrographic
New York Transf. Co.
Osborne Electric
PCA Electronics
Physics Research
Raytheon Mfg. Co.
Roller-Smith Co.
Rubicon Co.
Sangamo Electric
Sorensen & Co.
Southw. Ind. Electronics
Standard Transf. Corp.
Sterling Transf. Corp.
Sylvania Elect. Prods.
Tartak-Electronics, Inc.
Thermador Electcl. Mfg. Co
Thordarson-Meissner
Transformers, Inc.
Trenton Transf. Corp.
United Transf. Corp.
Viking Electric
Virginia Electronics
Wheeler Insul. Wire, Inc.

TRANSFORMERS, Ultrasonic

Acme Electric Corp.
Acro Products
Airpax Products
Altec Lansing
Atlantic Transf. Div.
Atlas Engrg. Co.
Audio Devel. Co.
Avion Div.
Basler Electric
Better Coil & Transf.
Calif. Magnetic Cont. Corp.
Communication Access. Co.
Corbett Science Labs.
Del Electronics Co.
Dietz Design & Mfg.
Electronic Transf. Co.
Ferranti Electric
Freed Transf. Co.
GE, Apparatus Sales
Goslin Elect. & Mfg. Co.
Gramer-Halldorson
Hycor Div.
Kenyon Transf. Co.
Keystone Products
Massa Labs.
Mechaponents Div.
Microtran Div.
NYT Electronics
Natl. Aircraft Corp.
North Hills Electric
Raytheon Mfg. Co.
Sangamo Electric
Sterling Transf. Corp.
Sylvania Elec. Prods.
Texas Insts., Inc.
Thermador Electcl. Mfg. Co.
Transformers, Inc.
Triad Transf. Corp.
United Transf. Corp.

TRANSFORMERS, Variable, including Auto-transformers

Acme Electric
Aerovox Corp.
Aircraft Transformer
Airdesign, Inc.
Airpax Products
Allied Control Co.
Altec Lansing
Atlas Engrg. Co
Avion Div.
Basler Electric
Better Coil & Transfs.
Burrell Corp.
Cambridge Thermionic
Carad Corp.
Chicago Electronic Engrg.
Chicago Std. Transf. Corp.
Coast Coil Co.
Colin Campbell Co.
Crow Electri-Craft Corp.
Del Electronics
Dietz Design & Mfg.
Dormeyer Industries
Dormitzer Elect. & Mfg.
Electrical Windings
Electronic Transf. Co.
Electro-Tech Equip.
Freed Transf. Co.
GE, Apparatus Sales
General Radio
General Transformer
Gramer-Halldorson
Green Rectifier Co.
Hevi-Duty Electric Co.
Jeffries Transf. Co.
Keystone Products
Laboratory Equip.
Langevin Mfg. Co.
Lindberg Engrg. Co.
Magnatron Inc.
Microtran Div.
Natl. Aircraft Corp.
Ohnite Mfg. Co.
Osborne Electric
Permoflux Corp.
Perkin-Elmer Corp.
Pimex, Inc.
Raytheon Mfg. Co.
Slaughter Co.
Sorensen & Co.
Standard Elect. Prods.
Standard Piezo
Sterling Transformer
Superior Electric
Tartak Electronics
Tech. App. Builders
Tensitron, Inc.
Thermador Electcl. Mfg. Co.
Thordarson-Meissner
Torwico Elects., Inc.
Tracerlab Inc.
Trenton Transf. Corp.
Triad Transf. Corp.
United States Electronics
United Transf. Corp.
Virginia Electronics
Westinghouse Electric
Westinghouse, X-Ray

TRANSFORMERS, Variable, Voltage Testing

Acme Electric
Aircraft Transf. Corp.
Airdesign, Inc.
Allied Control Co.
Atlas Engrg. Co.
Avion Div.
Basler Electric
Better Coil & Transformer
Calif. Magnetic Cont. Corp.
Carad Corp.
Chicago Electronic Engrg.
Chicago Std. Transf. Co.
Coast Coil Co.
Del Electronics
Dormitzer Elec. & Mfg.
Electronic Transf. Co.
Electrosig Corp.
Federal Telephone
Freed Transf. Co.
GE Apparatus Sales
Genl. Photo Prods. Co.
General Radio Co.
Goslin Electric
Gramer-Halldorson
Green Rectifier Co.
Hevi-Duty Electric Co.
Keystone Products
Langevin Mfg. Corp.
Megatran Inc.
Magnetic Instr. Co.
Merit Transf. Co.
Miller Transformer
Multi-Amp
Natl. Aircraft Corp.
Opad Electric
Pacific Transducer Corp.
Perkin-Elmer
Peschel Electronics, Inc.
Phen-Trols, Inc.
Precise Measmts. Co.
Raytheon Mfg. Co.
Sola Electric
Sorensen & Co.
Standard Transf. Corp.
States Co.
Sterling Transf. Corp.
Superior Electric
Sylvania Elect. Prods.
Electcl. Mfg. Co.
United States Electronics
Techn. App. Builders
Tensitron, Inc.
Thermador Electcl. Mfg. Co.
Thordarson-Meissner
Trenton Transf. Corp.
United States Electronics
United Transf. Corp.
Virginia Electronics
Weston Elect. Inst.

TRANSFORMERS, Voltage Regulating, see Transformers, Constant Voltage

TRANSISTOR TESTING SETS

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TRANSISTORS

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Bogue Electric
CBS-Hytron Div.
Centralab
Fretco, Inc.
GE, Electronics Div.
General Transistor Corp.
Hughes Prods. Div.
Industro, Inc.
Intelex Systems
Lansdale Tube Co.
Mallory & Co., P. R.
Minneapolis-Honeywell
Natl. Aircraft Corp.
Newark Electric Co.
Opplem Co.
Pacific Semiconductors
Philco Corp.
Radio Dev. & Res.
Radio Receptor Co.
Raytheon Mfg. Co.
Sprague Electric
State Labs., Inc.
Sylvania Elect. Prods.
Texas Insts., Inc.
Transistor Products
Transitron Electronics
Tung-Sol Electric
Westinghouse Electric

TRANSITS., Engineer's, see Surveying Instruments

TRANSITS, Pocket

Ainsworth & Sons
Berger & Sons
Dietzgen Co.
Garlynn Engrg. Co.
Graf-Apsco
Gurley, W.&L.E.
Keuffel & Esser
Leupold & Stevens
Los Angeles Scient.
Mico Instr. Co.
Suverkrop Instruments
United States Blue Print
Warren-Knight
White Co., Inc.
Wild-Heerbrugg

TRANSMITTERS, see Telemetering, also Pressure Differential Transmitters, also Temperature Transmitters, etc.

TRIMMERS, Capacitor, see Capacitors

TRIPOLI

Dixon, Inc., William
Harshaw Chemical Co.
Jadow, Inc.
Lea Mfg. Co.
Modern Tech. Supply
Newall Mfg. Co.
Rhodes & Co.
Sickles & Sons
United Shoe Mach.
Wagner Co., Inc., C.A

TRUCK-MILEAGE RECORDERS, see Mileage Indicators

TRUCK-TIME and/or MILEAGE RECORDERS, see Mileage Indicators

TUBE FITTINGS, see Fittings

TUBE TESTERS, Electron

Bendix, Cincinnati Div.
Chatham Electronics Div.
Chicago Indust. Instr. Co.
Datascan, Inc.
Electronic Instr Co.
Electronic Measmts. Corp.
Hickok Electcl. Instr. Co.
International Bus. Mach.
Jackson Electcl. Instr. Co.
Kahn & Co.
Manson Labs.
Newark Electric Co.
Philco Corp.
Precision Apparatus Co.
Radio City Prods.
Rheem Mfg. Co., Electrns.
Reiner Electronics
Sensitive Res. Instr.
Simpson Electric
Transvision, Inc.
Triplett Electcl. Instr.
Wallson Associates

TUBE TESTING MACHINES, see Pipe and Tube Testing Machines

TUBES, Ballast, see Current Regulators

TUBES, Bolometer, see Radiation Pickups

TUBES, Cathode Ray (including storage Type)

Amer. Elite Inc.
CBS-Hytron Div.
DuMont Labs., Allen B.
Edgerton, Germeshausen
Electronic Tube Corp.
Farnsworth Electronics
Ferranti Electric
GE Component Div.
GE, Tube Dept.
Haydu Brothers
Hughes Prods. Div.
Industro, Inc.
Kimble Glass Co.
Lansdale Tube Co.
Newark Electric Co.
North Amer. Philips
Owens-Illinois Glass
Philco Corp.
Pioneer Electronics
Radio Corp. of Amer.
Raytheon Tube Div.
Sylvania Elect. Prods.
Tung-Sol Electric
Vacuum Tube Products
Waterman Products

TUBES, Discharge, Gas and Vapor, including Argon, Mercury, Neon, Sodium, etc.

Amer. Instr. Co.
Amer. Optical
Amglo Corp.
Amperex Electronic Corp.
Anton Electronic Labs.
Aristo Grid Lamp Prods.
Baird Assocs.-Atomic Instr.
Bausch & Lomb
Bendix, Eclipse-Pioneer
Bendix-Friez
Bendix, Red Bank
Bomac Labs.
Brit. Electronic Sales Co.
Bush Assocs., G. F.
Central Scientific
CGS Labs.
Chatham Electronics Div.
Continental Electric
Cooper-Hewitt
DuMont Labs., Allen B.
Edgerton, Germeshausen
Edmund Scientific
Electrons, Inc.
Ferranti Electric
Fish-Schurman
Fredericks, George
Gaertner Scientific
Gates & Co., George W.
GE Components Div.
GE, Lamp Dept.
GE, Tube Dept.
General Physical Lab.
Gordos Corp.
Greiner Glassblowing
Hanovia Chem. & Mfg. Co.
Haydu Brothers
Huggins Labs.
Industro, Inc.
Intelex Systems
Jarrell-Ash
Kemlite Labs.
Lansdale Tube Co.
Leitz, Inc.
Menlo Research Lab.
Mico Instr. Co.
Nuclear Corp. of Amer.
Owens-Illinois Glass
Pfaltz & Bauer
Pioneer Electronics
Precise Measmts. Co.
Radiation Counter Labs.
Radio Corp. of Amer.
Superior Air Prods.
Sylvania Elect. Prods.
Ultra-Violet Prods.
Uniform Tubes
United Electronics
Universal X-Ray Prods.
Vacuum-Tube Prods.
Victoreen Instr. Co.
Zeiss, Inc., Carl

TUBES, Electrometer

Amperex Electronic
Electronic Measurements
Ferranti Electric
GE Components Div.
GE, Tube Dept.
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Bendix, Red Bank Div.
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Central Scientific
Chatham Electronics Div.
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Continental Corp.
Continental Electric
Cooper-Hewitt
DuMont Labs., Allen B.
Dunlee Corp.
Eitel-McCullough
Electrons, Inc.
Federal Telephone & Radio
Ferranti Electric
Fredericks, George E.
GE Components Div.
GE, Electronics Div.
GE, Tube Dept.
General Scientific Corp.
Gordos Corp.
Greiner Glassblowing
Huggins Labs
Industro, Inc.
Intelex Systems
Ken-Rad Tube & Lamp
Lansdale Tube Co.
Lectronic Research
Lewis & Kaufman
Litton Industries
Machlett Labs.
Magnavox Co.
Microwave Assocs., Inc.
Newark Electric Co.
North Amer. Philips
Nuclear Corp. of Amer.
Passaic Analytical Labs.
Philadelphia Scientific
Philco Corp.
Pioneer Electronics
Raytheon Tube Div.
RCA Tube
Ronar, Inc.
Scientific Glass App.
Sorenson & Co.
Sperry Gyroscope
Standard Arcturus
State Labs, Inc.
Sylvania Elect. Prods.
Thermosen, Inc.
Tung-Sol Electric
United Electronics
Universal X-Ray Prods.
Vacutron, Inc.
Vacuum Tube Products
Varian Assocs.
Victoreen Instr. Co.
Walker-Jamieson
Western Radiation
Wheelco Instr. Div.

TUBES, Geiger-Mueller (see also Counters, G-M)
Amer. Tradair Corp.
Amperex Electronic
Anton Electronic Labs.
Baird-Atomic
Beckman Instrument
Bendix Aviation
Detectolab, Inc.
Forro Scientific
GE, Electronics Div.
General Radio
Glasscraft Co.
Industro, Inc.
Instruments Inc.
Landsverk Electrometer
Leighton Labs.
NRD Instr. Co.
Newark Electric Co.
North Amer. Philips
Nuclear-Chicago
Nuclear Corp. of Amer.
Nuclear Devel. Lab.
Nucleonic Co. of Amer.
Pioneer Electronics
Radiation Counter Labs.
Raytheon Tube Div.
Sylvania Elect. Prods.
Technical Assocs.
Tracerlab Inc.
Universal Atomics Corp.
Victoreen Instr. Co.
Western Radiation Lab.
Wood Counter Lab., N.

TUBES, Glow, see Tubes, Discharge

TUBES, Ignitron
Amperex Electronic
GE Components Div.
GE, Tube Dept.
Industro, Inc.
Lectronic Research
National Electronics
Newark Electric Co.
North Amer. Philips
Pioneer Electronics
Radio Crp. of Amer.
Sylvania Electr. Prods.
Westinghouse Electric

TUBES, Klystron
Amperex Electronics
Bendix, Red Bank
Bomac Labs.
Eitel McCullough
Ferranti Electric
GE Components Div.
GE, Tube Dept.
Industro, Inc.
Lectronic Research
Marconi Instruments
Newark Electric Co.
Nuclear Corp. of Amer.
Polarad Electronics
Radio Corp. of Amer.
Sylvania Elect. Prods.
Techn. App. Builders
Varian Assocs.

TUBES, Lighthouse
Amperex Electronic
Bomac Labs.
Eitel-McCullough
Ferranti Electric
GE Components Div.
GE, Tube Dept.
Industro, Inc.
Machlett Labs.

TUBES, Magnetron
Amperex Electronic
Bomac Labs., Inc.
Fed. Telephone & Radio
Ferranti Electric
GE Components Div.
GE, Tube Dept.
Haydu Brothers
Industro, Inc.
Lectronic Research
Marconi Instruments
Microwave Assocs.,
Newark Electric Co.
North Amer. Philips
Nuclear Corp. of Amer.
Sylvania Electr. Prods.

TUBES, Nessler
Ace Glass
Bellco Glass
Central Scientific
Fischer & Porter Co.
Fish-Schurman
Fisher Scientific
Greiner, Emil
Greiner Glassblowing
Hellige, Inc.
Kimble Glass
Kontes Glass
LaMotte Chemical Prods.
Owen-Illinois Glass
Podbielniak, Inc.
Scientific Glass App.
Specialty Glass Co.

TUBES, Oil Centrifuge, see Oil Centrifuge Tubes

TUBES, Photosensitive including Phototubes and Photocells
Bradley Labs.
Continental Electric
De-Tec-Tronic Corp.
DuMont Labs., Allen B.
Electron-Radar Prods.
Eby Mfg. Co., Inc.
Farnsworth Electronics
Fredericks, George E.
G-M Labs.
GE Apparatus Sales
GE Components Div.
GE, Tube Dept.
General Scientific
Gordos Corp.
Hupp Electronics
Industro, Inc.
Instr. Devel. Labs.
Intelex Systems
International Rectifier
Lectronic Research
Machlett Labs.
Newark Electric Co.
Phoenix Prec. Instr.
Photo-Crystals, Inc.
Pioneer Electronics
Precise Measmts. Co.
Precision Products
RCA Tube
Ripley Co.
Rudolph & Sons
Scientific Specialties
Sylvania Elect. Prods.
Tracerlab Inc.
Vacutron, Inc.
Walker-Jamieson
Western Radiation Lab.
Worner Electronic Devices

TUBES, Pitot, see Pitot Tubes

TUBES, Polariscope
Amer. Instr. Co.
Bausch & Lomb
Central Scientific
Fecker, J. W.
Fish-Schurman
Gaertner Scientific
Hellige, Inc.
Jarrell-Ash
Koehler Instr. Co.
Precision Scientific
Rudolph & Sons, O. C.
Sargent & Co.
Scientific Glass App.

TUBES, Precision-Bore, see Tubing, Precision Bore

TUBES, Pyrometer Protection, see Thermowells

TUBES, Spectrum, see Spectrum Tubes

TUBES, Travelling Wave (see also Microwave Equipment)
Bomac Labs.
Federal Telephone & Radio
GE
Martin & Co., H. S.
Raytheon Mfg. Co.
Sperry Gyroscope Div.
Sylvania Elect. Prods.

TUBES, Thyratron
Amperex Electronic
Bendix, Red Bank
Bomac Labs.
Chatham Electronics Div.
DuMont Labs., Allen B
Edgerton, Germeshausen
Eitel-McCullough
Electrons, Inc.
GE Components Div.
GE, Tube Dept.
Industro, Inc.
Lectronic Research
Machlett Labs.
National Electronics
Nuclear Corp. of Amer.
Radio Corp. of Amer.
Raytheon Tube Div.
Sylvania Electr. Prods.
Techn. App. Builders
United Electronics
Vacuum Tube Prods.

TUBES, Ultra-Violet Light, see Light Sources

TUBES, Vacuum, see Tubes, Electron, Vacuum

TUBES, Venturi, see Venturi Tubes

TUBES, Voltage Regulator, see Tubes, Discharge; also Current Regulators

TUBES, X-ray
Amer. Instr. Co.
Amperex Electronic Corp.
Corning Glass Works
Dunlee Corp.
Eureka X-Ray Tube
Ferranti Electronic
GE, X-Ray Dept.
Jarrell-Ash
Kelley Koett Mfg.
Machlett Labs.
North Amer. Philips
Picker X-Ray
Ronar, Inc.
Standard Arcturus
Stoelting Co., C. H.
Tracerlab Inc.
Universal X-Ray Prods.
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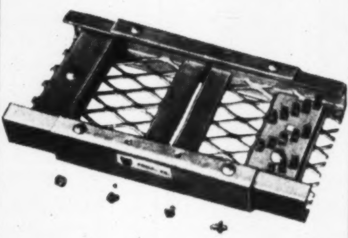
Westinghouse X-Ray Co.
Wyland George

TUBING, Armor, see Tubing, Capillary Casing; also Tubing, Flexible, Stainless Steel

TUBING, Bourdon
American Brass Co.
Mackenzie Walton Co.
Precision Tube Co.
Preis Engrg. Mach.
Seegers Mfg. Co.
Servonic Instruments
Summerill Tubing Co.
Superior Tube Co.

TUBING, Capillary
Ace Glass
Amer Brass
Autoclave Engrs.
Bishop & Co., J.
Corning Glass Works



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P-W
for Supporting Instrument Tubing

P-W Manufactures a complete trough system with channel connectors. Drive rivets are used for quick assembly.—Extension Connectors eliminate field cutting—Adjustable connectors for any change in direction or elevation—I Section for long spans—Tube Clips—Cushion Clamps

Raceway to support a limited number of tubes with connectors, elbows, tees, etc.—Bulkhead Bar. P-W systems are available in widths from 1" to 24" and in lengths from 1' to 16'.

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The Structure To Support Tubetrof . . . Cabletrof . . . Shelving . . . Conduit . . . Cables . . . Pipe, Etc.

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(Representatives to serve you!)

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Crystal Glass Tube
Edna Lite Co.
Everett Products
Fischer & Porter Co.
Fish-Schurman
Flexonics Corp.
Friedrich & Dimmock
General Plate Co.
Greiner Glassblowing
High Pressure Equip.
Johnson Engrg. Co.
Kontes Glass
Machlett & Son
Mackenzie Walton Co.
Owens-Illinois Glass
Penn Brass & Copper
Penna. Flexible Metallic
Phoenix Prec. Instr.
Prec. Glass Prods. Co.
Precision Tube Co.
Preis Engrg. Mach.
Revere Copper & Brass
Steatite Div.
Summerill Tubing Co.
Superior Tube Co.
Trerice Co., H. O.
Uniform Tubes
Viking Copper Tube Co.
Wolverine Tube Div.

TUBING, Capillary Casing

Amer. Brass Co.
Flexonics Corp.
Mackenzie Walton
Packless Metal Hose
Penna. Flexible Metallic
Uniform Tubes
Universal Metal Hose

TUBING, Ceramic

Bristol Co.
Centralab Div.
Crowley & Co., H. L.
Du-Co Ceramics
Electronic Mech., Inc.
Fish-Schurman
General Ceramics
Lapp Insulator Co.
McDanel Refr. Porcelain
Morganite, Inc.
Saxonburg Ceramics
Steatite Div.
Stupakoff Div.
Superior Steatite
Sylvania Elec. Prods.
Thermo Materials, Inc.
Thor Ceramics, Inc.
U. S. Stoneware Co.

TUBING, Fibre

Auburn Mfg. Co.
Continental Diamond Fibre
Insulation Mfrs. Corp.
Mitchell Rand Insulating
Natl. Vulcanized Fibre
Paramount Paper Tube
Precision Paper Tube
Spaulding Fibre
Wilmington Fibre

TUBING, Flexible, Brass, Steel

Amer. Brass Co.
Bendix, Eclipse-Pioneer
Breeze Corporations
Bridgeport Brass Co.
Clifford Mfg. Co.
Flexaust Co.
Flexonics Corp.
Packless Metal Prods.
Penna. Flexible
Seamlex Co., Inc.
Stewart Mfg. Co.
Techniflex Corp.
Univ. Metal Hose
Viking Copper Tube Co.
Weatherhead Co.

TUBING, Flexible, Multitube

Bailey Meter Co.
Crescent Insul. Wire
Insulation Mfrs. Corp.
Moore & Co., Samuel
Polymer Corp.

TUBING, Flexible, Stainless Steel

Alloy Tube Div.
Amer. Brass Co.
Bendix-Eclipse Pioneer
Bishop & Co., J.
Breeze Corporations
Clifford Mfg. Co.
Crucible Steel
Flexonics Corp.
High Pressure Equipt. Co.
Packless Metal Prods.
Penna. Flex. Met. Tubing
Schnitzer Alloy Prods.
Seamlex Co.
Techniflex Corp.
Uniform Tubes
Univ. Metal Hose

TUBING, Fused Quartz

Ace Glass
Aristo Grid Lamp Prods.
Corning Glass Works
Fish-Schurman
GE, Lamp Dept.
Gordon Co., Claud S.
Hanovia Chem.
Machlett & Son
Prec. Glass Prods. Co.
Thermal Amer. Fsd. Quartz
Thermal Syndicate
Torrance Glass & Color

TUBING, Glass Fibre, Insulation

Auburn Mfg. Co.
Bache & Company, Semon
Bentley, Harris Mfg. Co.
Birnbach Radio
Brand and Co., William
Continental-Diamond Fibre
GE Laminated Prods.
Hitemp Wires, Inc.
Insulation Mfrs. Corp.
Mica Insulation
National Vulcanzd. Fibre
Resinite Dept., Borden
Spaulding Fibre
Thermo Nuclear Wire Ind.

TUBING, Laminated Phenolic

Auburn Mfg. Co.
Bakelite Corp.
Continental-Diamond Fibre
Formica Co.
Garlock Packing
GE. Chem. Dept.
GE Laminated Prods.
General Winding Co.
Insulation Mfgrs.
Mica Insulator
Natl. Vulcanized Fibre
Precision Paper Tube
Richardson Co.
Spaulding Fibre
Stone Paper Tube
Synthane Corp.
Wilmington Fibre

TUBING, Low Coefficient of Expansion

Aeroquip Corp.
Amer. Lava Corp.
Amersil Co.
Carpenter Steel Co.
Centralab Div.
Corning Glass
Du-Co Ceramics
Fansteel Metallurgical
Fish-Schurman
Garlock Packing
Glasscraft Co.
Hitemp Wires, Inc.
Kontes Glass
Phoenix Prec. Instr.
Prec. Glass Prod. Co.
Precision Tube
Stupakoff Div.
Summerill Tubing Co.
Superior Tube Co.
Thermal Amer. Fsd. Quartz
Thermal Syndicate

TUBING, Mica

Auburn Mfg. Co.
Continental-Diamond Fibre
Insulation Mfgrs.
Mica Insulator

TUBING, Miscellaneous, including Illium, Invar Kovar, special alloy, tantalum

Alloy Tube Div.
Autoclave Engrs.
Bishop & Co., J.
Carpenter Steel Co.
Crucible Steel
Everett Products
Fansteel Metallurgical
Ferner Co., R. Y.
Flexaust Co.
General Plate Div.
Haynes Stellite
Stupakoff Div.
Summerill Tubing Co.
Superior Tube Co.
Uniform Tubes, Inc.
Vacuum Res. Co.

TUBING, Nickel, Monel, Inconel

Autoclave Engrs.
Bishop & Co., J.
Crucible Steel
Driver-Harris Co.
General Plate Co.
Gordon Co., Claud S.
High Pressure Equipt. Co.
Johnson Engrg. Co.
Mackenzie Walton
Metal Goods Corp.
Parker Appliance Co.
Precision Tube Co.
Preis Engrg. Mach.
Stupakoff Div.
Summerill Tubing Co.
Superior Tube Co.
Uniform Tubes, Inc.

TUBING, Paper

Auburn Mfg. Co.
Edmund Scientific Corp.
Insulation Mfrs. Corp.
Paramount Paper Tube
Precision Paper Tube
Ritchie & Co., W. C.
Stone Paper Tube

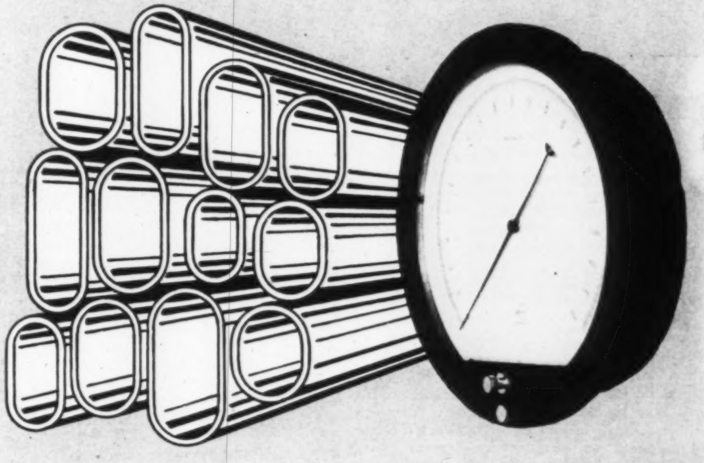
TUBING, Plastic

Ace Plastic Co.
Allegheny Plastics
Alloy Tube Div.
Amer. Hard Rubber
Amer. Phenolic Corp.
Auburn Button Works
Auburn Mfg. Co.
Bakelite Corp.
Balfor Industries
Bel-Art Products
Bentley, Harris Mfg. Co.
Birnbach Radio Co.
Blum & Co., Julius
Brand and Co., William
Carbide & Carbon Chem.
Carroll Co.
Cast Optics
Commercial Plastics Co.
Continental-Diamond Fibre
Crane Packing Co.
Crescent Insul. Wire
Dow Chemical Co.
DuPont
Dura Plastics
Electronic Mechanics
Erie Resistor Corp.
Formica Co.
Friedrich & Dimmock
Garlock Packing Co.

HEISE GAUGES

Designed for Dependability

Does your high pressure gauge application require a scientifically designed Bourdon Tube?



Where highly accurate results are required design considerations such as the depth — width ratio of the Bourdon Tube section are of paramount importance.

Extreme fiber stress resulting from improper design of the tube may render an apparently good instrument completely undependable.

At the Heise Laboratories, mathematical solutions for determining the size and shape of Bourdon Tubes for specific use are augmented by years of research and tests on various types of tubes to assure correct stress distribution.

Heise Bourdon Tubes are heat treated by scientific methods to guarantee that each tube will be metallurgically sound for its application. The precision heat treatment of thin walled tubing without distortion has been made possible by equipment and technique developed by Heise Laboratories.

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Pressure Ranges 15 to 20,000 P.S.I. Dial Sizes 8½"—12"—16"

Prices from $151.60. **DELIVERY WITHIN 30 DAYS.**

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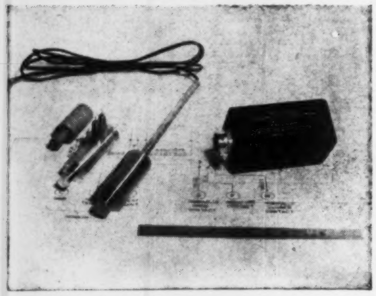
ULTRASONIC
LIQUID LEVEL SENSOR



Here is a new miniaturized, highly accurate liquid level point sensor for aircraft, missile fuel and oxidizer systems and propellant control. A commercial version, Model RC-1, is especially suited for use in filling and voiding in the fuel and petroleum industry; in chemical processing and production; in the dairy industry; in packaging of all liquids.

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FEATURES:

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- **Absolutely no spark or radiation hazard**
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- **Accuracy better than 1/64"**

Various modifications are available to meet your particular needs. Probes capable of sensing cryogenic, highly corrosive, or radioactive liquids are available.

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Dept. 1A.

ACOUSTICA ASSOCIATES, INC.

26 Windsor Ave., Mineola, L. I., N. Y.
Pioneer 7-7900

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GE, Laminated
Goodrich Co., B. F.
Goodyear Tire
Hamilton Rubber
Hitemp Wires Inc.
Imperial Brass
Keller Prods
Mica Insulator
Mitchell Rand Insulating
Monsanto Chemical
Moore & Co., Samuel
Morris Co., J. I.
National Varnished Prods.
Newage Industries
Parisian Novelty
Phalo Plastics Corp.
Phipps & Bird, Inc.
Polymer Corp.
Precision Paper Tube
Republic Rubber Div.
Resinite Dept., Borden
Resistoflex Corp.
Rex Corp.
Richardson Co.
Spaulding Fibre
Stone Paper Tube
Surprenant Mfg. Co.
Synthane Corp.
Tensolite Insul. Wire
Thermo Nuclear Wire Ind.
Thor Ceramics, Inc.
Tube Turns Plastics
U. S. Gasket Co.
U. S. Rubber Co.
Valley-National Corp.
Vanton Pump & Equip.
Watertown Mfg. Co.
Weatherhead Co.
Werner Co., Inc., R. D.

TUBING, Precious Metals, including Platinum

Amer. Platinum Works
Baker & Co., Inc.
Bishop & Co., J.
Cohn Mfg. Co., Sigmund
Eisele & Co.
General Plate Div.
Insulation Mfgrs.
Johnson Engrg. Co.
Newall Mfg. Co.
Ney Co.
Secon Metal Corp.
Uniform Tubes, Inc.
Wilson Co., H. A.

TUBING, Precision Bore, Glass, see Glass Tubing

TUBING, Precision Bore, Metal

Bishop & Co., J.
General Plate Div.
High Pressure Equipt. Co.
Mackenzie Walton Co.
Precision Tube Co.
Superior Tube Co.
Torrington Co.
Uniform Tubes, Inc.

TUBING, Rubber (see also Hose, Rubber)

Aeroquip Corp.
Atlantic India Rubber
Auburn Mfg. Co.
Dixon Inc.
Flexaust Co.
Garlock Packing Co.
General Tire & Rubber
Goodrich Co., B. F.
Goodyear Tire
Hamilton Rubber
Harshaw Chemical
LaPine & Co.
Luzerne Rubber Co.
Machlett & Son
Popper & Klein
RKL Valve & Mfg. Co.
Raybestos-Manhattan, Inc.
Republic Rubber Div.
Resistoflex Corp.
Rubatex Div.
Stokes Molded Prods.
U. S. Rubber Co.
Vanton Pump & Equip.
Weatherhead Co.
Werner Co., Inc., R. D.

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Cope, Inc.
Instrof Div.
Naybor Labs., E. V.
P-W Industries
Parker Appliance Co.
Rakit Corp.
Unistrut Products
Weckesser Co.
Wolfe & Mann

TUBING, Varnished or Lacquered

Bentley, Harris Mfg. Co.
Birnbach Radio
Brand and Co., William
Insulation Mfgrs.
Paramount Paper Tube
Precision Paper Tube

TUNGSTEN

Amer. Electro Metl.
Baker Chem. Co., J. T.
Belmont Smg. & Refg.
Cleveland Tungsten Mfg.
Conn Mfg. Co., Sigmund
Dixon, Inc., Wm.
Electro Metallurgical Co.
Electronic Parts Mfg.
Fansteel Metallurgical
GE, Lamp Wire & Phos.
P. R. Mallory & Co.
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Pittsburgh 12, Pa.

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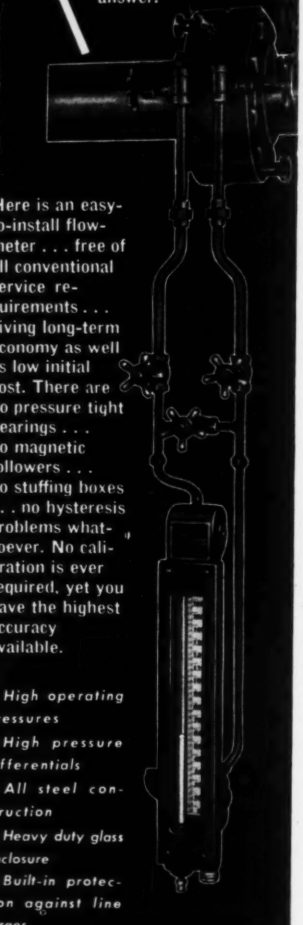
in direct flow indication

Wherever you seek simplicity and high accuracy in flow measurement at lowest cost, the Meriam "H" Meter is the well-known answer.



Here is an easy-to-install flowmeter . . . free of all conventional service requirements . . . giving long-term economy as well as low initial cost. There are no pressure tight bearings . . . no magnetic followers . . . no stuffing boxes . . . no hysteresis problems whatsoever. No calibration is ever required, yet you have the highest accuracy available.

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automatic thickness gages

measure thicknesses from one side with accuracies as high as 0.1%. Used extensively on forged, extruded, cast, machined, chem-milled, welded and brazed parts for dimensional and internal-discontinuity checks. Range 0.005" to 3". *Above:* a VIDIGAGE® tester checks machining of a hollow aluminum propeller at Hamilton-Standard Division of United Aircraft.

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increases cleaning speed and improves removal of soils and chips. Dependable *generators* drive complete *tank units* from ½ to 25 gallons, or *immersible transducers* for larger batch and conveyor installations.

The coupon will bring you further information on the industrial uses of ultrasonics. If you have a specific problem, give us the details.

BRANSON ULTRASONIC CORPORATION

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VIDIGAGE® Bulletin V-200 ☐
on ultrasonic gaging from one side
SONOGEN® Bulletin S-212 ☐
on ultrasonic cleaning of parts
Name..
Dept..
Firm...
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For more information circle **387** on inquiry card.

Tungsten Contact Mfg.
Westinghouse Electric
Wilson Co., H. A.
Willey's Carbide Tool

TUNING FORKS, see Forks, Tuning

TURBIDIMETERS

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Baird-Atomic
Boekel & Co.
Bowen & Co.
Bristol Co.
Cargille, R. P.
Central Scientific
Coleman Instr.
Ercona Corp.
Ess Instr. Co.
Ferguson Co.
Fisher Scientific
GE, Apparatus Sales
Hallikainen Instruments
Hellige, Inc.
Instrument Devel. Labs.
Klett Mfg. Co.
Kimble Glass
Owens-Illinois Glass
Parr Instr. Co.
Pfaltz & Bauer
Phipps & Bird
Phoenix Prec. Instr.
Photovolt Corp.
Precision Scientific
Process & Instruments
Radioactive Products
Rawson Electcl. Instr.
Rubicon Co.
Sensitive Res. Instr.
Testing Machines, Inc.
Zeiss, Inc., Carl

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Baldwin-Lima-Hamilton
Farris Engrg. Co.
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GE
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Hagan Corp.
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Shallcross Controls
Stratos Div.
Synchro-Start Products

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Keller & Co., L. H.
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Bogue Elect. Mfg. Co.
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Brush Electronics
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Dice Co.
DuMont Labs., Allen B.
Dyna-Empire, Inc.
Engineering Res. & Dev.
Ercona Corp.
Erdco Engrg.
Freed Transformer
Fruengel, Inc.
GE, Apparatus Sales
General Precision Lab.
General Radio
General Ultrasonic Co.
Genzlinger, Inc.
Gulton Industries
Hall Sonic Engrg. Co.
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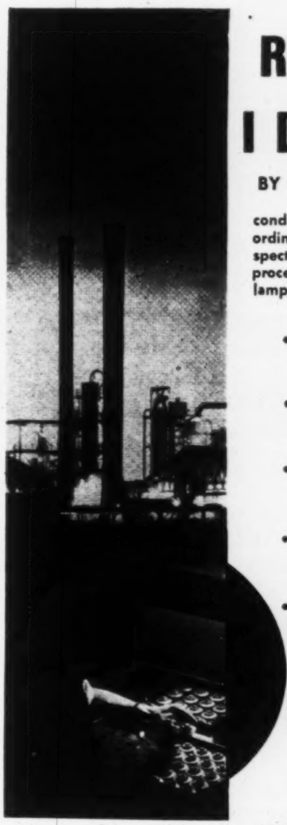
Industrial Gauges Corp.
Kahn & Co.
Kay Electric
Kinematic Instr.
Magnaflux Corp.
Massa Labs.
Maxson Instr. Div.
McKenna Labs.
Measurements Corp.
Moore Corp., John B.
Natl. Inst. Labs.
Ostby & Barton Co.
Photocon Research
Radex Corp.
Radioative Prod.
Raytheon Mfg.
Scott, Inc., H. H.



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BY MEANS OF FLOURESCENCE

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GE
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Menlo Research Lab.
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Cooper-Hewitt
Davenport Mfg. Co.
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Engineering Res. & Dev.
E & S Optical
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Ferner Co.
Fish-Schurman Corp.
Fisher Res. Lab.
Fredericks, George
Gaertner Scient. Corp.
Gates & Co., George W.
GE, Lamp Dept.
Greiner Glassblowing Lab.
Haledy Electronic Co.
Hanovia Chem. & Mfg.
Huggins Labs.
Jarrell-Ash Co.
Kemlite Labs.
Leitz, Inc.
Macbeth Corp.
Magnaflux Corp.
Menlo Research Lab.
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Pacific Transducer Corp.
Perkin-Elmer
Pfaltz & Bauer, Inc.
Photovolt Corp.
Precise Measurements
Prec. Glass Prods. Co.
Quartz Products Co.
Regal Instr. Co.
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Sampson Chem. & Pigment
Stocker & Yale
Switzer Bros.
Sylvania Elec. Prod.
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Thermal American Fuzed
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General Laboratory
Green Rectifier Co.
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Joy Mfg. Co.
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Kinney Mfg. Div.
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Vacuum Res. Co.
Vacuum Tube Prods.
Vanton Pump & Equipt.
Veeco Vacuum Corp.
Wakefield Industries
Welch Mfg. Co., W. M.
Whittington Pump & Engrg.
Will Corp.
Worthington Corp.

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Foster Engrg. Co.
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Jordan Corp. Div.
Marine & Indust. Prods.
Pancro Mirrors, Inc.
Schade Valve Mfg. Co.
Trerice Co., H. O.
Watts Regulator Co.

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Consol. Electrodynamics
Consolidated Vacuum
Distillation Products
Helicoid Gage Div.
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Manning, Maxwell & Moore
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Process & Instruments
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Scient. Inst. Dev. Lab.
Star-Martin Gage Co.
Trerice Co., H. O.
Universal X-Ray Prods.
U. S. Gauge Div.
Vacuum Tube Prods.
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Wallace & Tiernan, Inc.
Weksler Thermom. Corp.
Welch Mfg. Co., W. M.

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Central Scientific
Consol. Electrodynamics
Consolidated Vacuum
Continental Electric Co.
Distillation Prods.
Electron-Radar Prods.
Ferguson Co.
Fredericks Co., Geo.
GE, Tube Dept.
General Physical Lab.
Green Rectifier Co.
Hastings-Raydist, Inc.
Helicoid Gage Div.
High Vacuum Equipt. Corp.
Kinney Mfg. Div.
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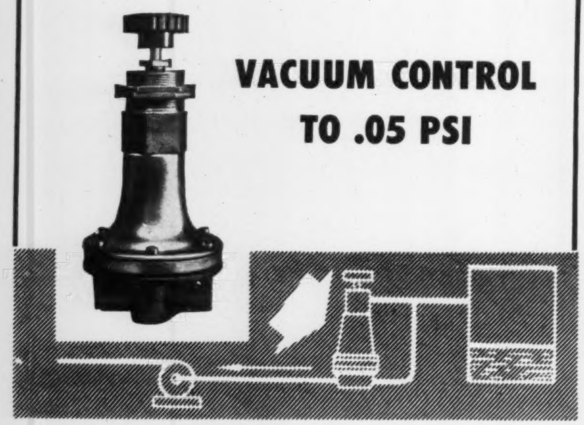

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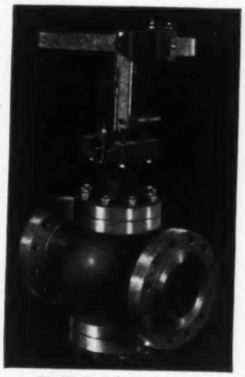

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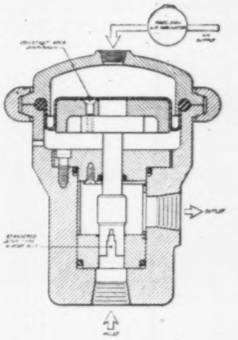

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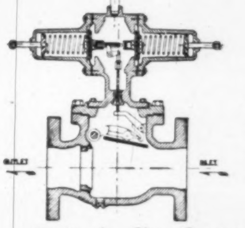

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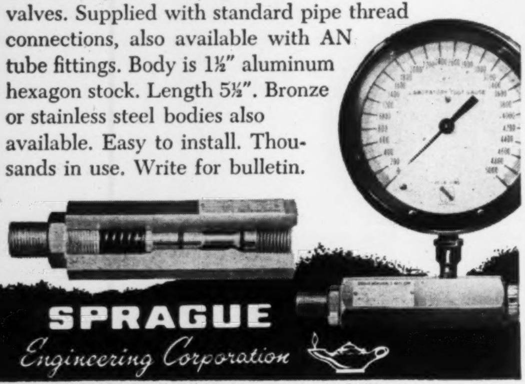

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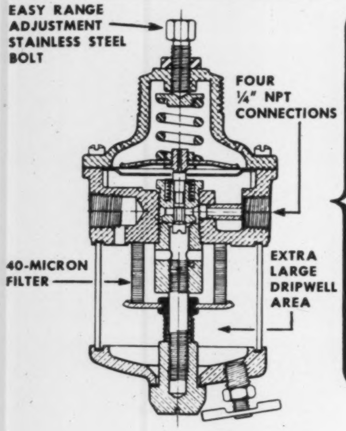
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Farris Engineering
Farris Flexible Valve
Fischer & Porter Co.
Fisher Governor Co.
Flexible Valve Corp.
Foster Engrg. Co.
Friez Instrument Div.
Foxboro Co.
Fulton Sylphon Div.
Galland-Henning
General Controls Co.
Genl. Regulators Corp.
Gleason-Avery Inc.
Gotham Instr. Div.
Grinnell Co., Inc.
Hammel-Dahl Co.
Hanna Engrg. Works
Hasko Valve & Machine
Hathaway Instrument
Henry Valve Co.
Hills-McCanna
Hoke, Inc.
Hunt & Son
Hydromatics Inc.
Imperial Brass Mfg.
Industrial Filter
Infilco Inc.
Jamesbury Corp.
Johnson Services Co.
Jordan Regulator
Keckley Co., O. C.
Kieley & Mueller
Klipfel Valves
Kohler Co.
Laboratory Equipment
Larson Instrument
Ledeen Mfg. Co.
Leslie Co.
Megnetrol, Inc.
Manning, Maxwell & Moore
Mason-Neilan Div.
McAlear Mfg.
Mead Specialties Co.
Milwaukee Gas
Minneapolis-Honeywell
  Indust., Div.
Moore Products
Natl. Aircraft Corp.
National Pneumatic
North Amer. Mfg. Co.
Partlow Corp.
Paul Valve Co.
Penfield Mfg. Co.
Perfex Corp.
Philadelphia Gear Works
Powers Regulator Co.
Pressure Products
Refrigerating Spec. Co.
Reliance Instr. Mfg. Co.
Republic Flow Meters
Research Controls
Reynolds Gas Regulator
Rivett Lathe & Grinder
R.K.L. Valve & Mfg. Co.
R-S Products Corp.
Rockwell Co., W. S.
Rockwell Mfg.
Rockwood Sprinkler
Ross Operating Valve Co.
Schade Valve Mfg. Co.
Schrader's Son, A.
Schutte & Koerting
Scientific Instr. Co.
Security Valve Corp.
Seely Inst. Co., Inc.
Shallcross Controls
Smith Co., S. Morgan
Soreng Products
Spence Engrg. Co.
Stratos Div.
Swanson Engrg.
Swartwout Co.
Taylor Instr. Cos.
Trerice Co.
Uniflow Valve Corp.
Valv-Trol Co.
Valvair Corp.
Watts Regulator
Westinghouse Air Brake Co.
Weston Electcl. Instr.
White Indust. Div., S. S.
White-Rodgers Electric

VALVE POSITIONERS

AiResearch Mfg. Co.
Allard Instr. Corp.
Annin Co.
Askania Reg. Co.
Atlas Valve Co.
Autom. Timing & Controls
B-I-F Industries
Bailey Meter Co.
Barber-Colman
Bristol Co.
Builders-Providence
Cleveland Fuel Equip.
Conoflow Corp.
Crescent Engrg. & Res. Co.
Dahl Co., Inc., G. W.
DeZurik Shower Co.
Farris Flexible Valve
Fischer & Porter Co.
Fisher Governor Co.
Foxboro Co.
General Controls Co.
General Regulator
Hagan Chem. & Controls
Hammel-Dahl
Hanna Engrg. Works
Hays Corp.
Heat-Timer Corp.
Johnson Service Co.
Jordan Co.
Ledeen Mfg. Co.
Magnetic Amplifiers
Magnetic Industries
Manning, Maxwell & Moore
Mason-Neilan Div.
Minneapolis-Honeywell
  Indust. Div.
Moog Valve Co.
Moore Products Co.
National Controls
Penn Insts. Div.
Philadelphia Gear Works
Powers Regulator Co.
Republic Flow Meters
Scientific Instr. Co.
Shallcross Controls
Stratos Div.
Superdraulic Corp.
Swartwout Co
Taylor Instr. Cos.
Techniflex Corp.
Tejax Engrg. Corp.
Weighing & Control Comps.
Weston Electl Instr.
Westinghouse Air Brake Co.

VALVE POSITION REMOTE INDICATORS

Aeronaut., Robertshaw-
  Fulton
Airmatic Valve
Allis-Chalmers
Annin Co.
Atlas Valve Co.
Autocall Co.
Automatic Control Co.
Autom. Timing & Controls
B-I-F Industries
Bailey Meter Co.
Barber Coleman
Beck Co.
Black, Sivalls & Bryson
Bristol Co.
Builders-Providence
Climax Div
Colvin Labs., Inc.
Conoflow Corp.
Crescent Engrg. & Res. Co.
Cutler-Hammer, Inc.
DeZurick Shower Co.
Doelcam Div.
Elec. Indicator Corp.
Elec. Tachometer Corp.
Femco, Inc.
Fisher Governor Co.
Foxboro Co.
General Controls
G.E., Apparatus Sales
Gen. Regulator Corp.
Hagan Chem. & Controls
Hammel-Dahl Co.
Hays Corp.
Heat-Timer Corp.
Johnson Service Co.
Jordan Co.
Kearfott Co., Inc.
Kieley & Mueller
Kybernetes Corp.
Lear, Inc.
Leupold & Stevens
Liquidometer Corp.
Magnetic Industries
Mason-Neilan Div.
Minneapolis-Honeywell
  Indust. Div.
Moore Products
North American Insts.
Northern Equipment Co.
Panellit, Inc.
Philadelphia Gear Works
Republic Flow Meters
Robertshaw-Fulton Controls
SCAM Instrument
Shand & Jurs Co.
Sparton Cont. Systems
Superdraulic Corp.
Taylor Instr. Cos.
Tejax Eng. Corp.
Uniflow Valve
Westinghouse Electric
Weston Electcl. Instr.
Wheelco Instr. Co.

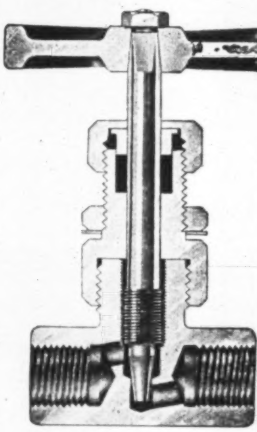
VALVES, Automatic Shutoff, including Fuel Shutoff

Accessory Prods. Corp.
Aero Supply Mfg. Co.
Aeronaut, Robertshaw-
  Fulton
AiResearch Mfg. Co.
Airmatic Valve
American Meter Co.
Annin Co.
A-P Controls Corp.
Askania Reg. Co.
Assoc. Valve & Engr. Co.
Atkomatic Valve
Atlas Valve Co.
Atwood & Morrill
Autom. Switch Co.
Autom. Timing & Controls
Autom. Valve Controller
Automation Prods., Inc.
Barber-Colman Co.
Barksdale Valves
Baso, Inc.
Bastian-Blessing
Black, Sivalls & Bryson
Bristol Co.
Carruthers & Fernandez
Cash Co., A. W.
Cash Valve Mfg. Corp.
Clark Cooper Co.
Climax Div.
Continental Equipt. Co.
Cutler-Hammer
Dahl Co., G. W.
Davis Reg. Co.
DeZurik Shower Co.
Douglass Automatic
Eastern Aircraft Prods.
Eclipse Fuel Engrg. Co.
Edison Co., Thomas A.
Edward Valves, Inc.
Electronics Corp. of Amer.
Exact Weight Scale Co.
Farris Engineering
Farris Flexible
Fisher Governor Co.
Fischer & Porter Co.
Flexible Valve Corp.
Foster Engrg. Co.
Frick Co.
Friez Instrument
Fulton Sylphon Div.
Gar Prec. Parts, Inc.
Gas Appliance Specialties
General Combustion Corp.
General Controls Co.
Golden Anderson
Gould Co., J. D.
Grove Regulator
Hammel-Dahl Co.
Hasko Valve & Machine
Hawk Tool & Eng. Co.
Heat-Timer Corp.
Henry Valve Co.
Hetherington & Berner
Hills-McCanna
Hydromatics Inc.
Imperial Brass
Jackes-Evans Mfg.
James-Pond-Clark
Jerguson Gage
Johnson Service
Jordan Regulator Corp.
Kahn & Co.
Keckley Co., O. C.
Kieley & Mueller
Klipfel Valves
Kohler Co.
Leslie Co.
Lonergan Co.
Magnatrol Valve
Magnetic Industries
Mason-Neilan Div.
McAlear Mfg.
Metal Goods Corp.
Minneapolis-Honeywell
Natl. Aircraft Corp.
National Controls
Natural Gas Equipt.
OPW Corp.
P-K Valve Co.
Partlow Corp.
Penn Electric Switch
Pennsylvania Pump
Petrometer Corp.
Power Engrg. & Equipt.
Preferred Utilities
Propulsion Dev. Labs.
Republic Mfg. Co.
Research Controls
Revere Corp.
Reynolds Gas Reg. Co.
R. K. L. Valve & Mfg. Co.
Robbins Aviation
Rockwell Co., W. S.
Rockwell Mfg. Co.
Ross Operating Valve
R-S Prod. Corp.
Schade Valve Mfg. Co.
Schrader's Son, A.
Schutte & Koerting
Security Valve Corp.
Seely Inst. Co., Inc.
Selas Corp. of Amer.
Shand & Jurs Co.
Simmonds Aerocessaries
Skinner Elect. Valve Div.
Smith Co., S. Morgan
Snap-Tite, Inc.
Spence Engineering Co.
Sprague Engrg. Corp.
Squires Co., C. E.
Straham Valves
Trerice Co., H. O.
Uniflow Valve
Vacuum Research Co.
Valco, Inc.
Valcor Engrg. Corp.
Valvair Corp.
Valv-Trol Co.
Vapor Recovery Systems
Versa Prods. Co., Inc.
Viking Instr. Co.
Watts Regulator Co.
Weatherhead Co.
Wheelco Instr. Co.
W-K-M Mfg. Co.
Zenith Optical

VALVES, Bellows Seal, see Valves, Packless

VALVES, Butterfly

Accessory Prods. Corp.
Aero Supply Mfg. Co.
Aeronaut., Robertshaw-
  Fulton
AiResearch Mfg. Co.
Atwood & Morrill
B-I-F Industries
Baldwin-Lima-Hamilton
Black, Sivalls & Bryson
Century Controls Corp.
Conoflow Corp.
Continental Equipment
Dahl Co., G. W.
Davis Regulator
Eclipse Fuel Engrg. Co.
Fisher Governor Co.
Foxboro Co.
Futurcraft Corp.
General Controls Co
Hammel-Dahl Co.
Hasco Valve & Machine
Johnson Service Co.
Kieley & Mueller
Mason-Neilan Div.
Minneapolis-Honeywell
  Indust. Div.

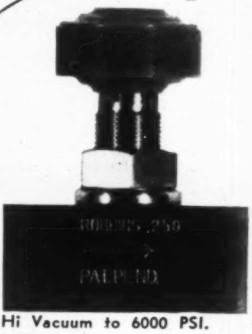


DRAGON NEEDLE VALVES

Designed for HIGH PRESSURE service where POSITIVE fluid control, SAFETY and economy are vitally important. DRAGON aluminum bar stock, forged steel, Monel and stainless steel needle VALVES are available in globe or angle type and for panel mounting installations.

DRAGON ENGINEERING CO.
5815 So. Central Ave.
Los Angeles 11, Calif.

For more information circle **395** on inquiry card.



ROBBINS

Leakproof Metering Valves

- Hi Vacuum to 6000 PSI.
- "O" Rings and Teflon or Nylon Seats are standard.
- Over-torquing cannot damage seat or needle as buffer plate and metering pin act as a forming die.
- Impossible to score needle or seat.
- Lifetime Valve—can be completely overhauled in a matter of minutes without disturbing plumbing or mounting.
- The most economical valve in the long run.

Write for further details.

ROBBINS AVIATION
1735 W. Florence Ave.
Los Angeles 47, Calif.

For more information circle **396** on inquiry card.

Natl. Aircraft Corp.
National Controls
Republic Flow Meters
Rockwell Co., W. S
Schutte Koerting
Smith Co., S. Morgan
Stratos Div.
Worthington Corp.

VALVES, Constant Pressure

A-P Controls Corp.
Accessory Prods. Corp.
Air Associates
AiResearch Mfg. Co.
Airmatic Valve
Alco Valve
Annin Co.
Askania Reg. Co.
Assoc. Valve & Engrg.
Atlas Valve
Atwood & Morrill
Autom. Switch Co.
Bailey Meter Co.
Bastian-Blessing
Black, Sivalls & Bryson
Bristol Co.
Cadillac Gage Co.
Cash Co., A. W.
Cash Valve Mfg. Corp.
Climax Div.
Conoflow Corp.
Continental Equip. Co.
Cooper Co., Clark
Cutler Hammer
Davis Reg. Co.
Defender Instr. & Reg.
Dennison Engineering
Eastern Aircraft Prods.
Eclipse Fuel Engrg. Co.
Electronic Communication
Fisher Governor Co.
Foster Engrg. Co.
Fulton-Sylphon Div.
Gadgets, Inc.
General Controls
Golden-Anderson
General Regulators
Greiner, Emil
Grove Valve & Regulator
Hammel-Dahl Co.
Henry Valve Co.
Hoke, Inc.
Ideal-Aerosmith
Indust. Engrg. Corp.
Jenkins Bros.
Jordan Regulator Corp.
Kates Co., W. A.
Keckley Co., O. C.
Kieley & Mueller
Klipfel Valves
Leslie Co.
McAlear Mfg. Co.
Mercon Regulator
Minneapolis-Honeywell
Moog Valve
Natl. Aircraft Corp.
Natural Gas Equipment
Newmatic Corp.
Powers Regulator Co.
Republic Mfg. Co.
Reynolds Gas Reg. Co.
R.K.L. Valve & Mfg. Co.
R-S Prods. Corp.
Rockwell Co. W. S.
Robbins & Assocs.
Sanders Associates
Schade Valve Mfg. Co.
Schutte & Koerting
Seely Inst. Co.
Simplex Valve & Meter Co.
Smith Co., S. Morgan
Spence Engrg. Co.
Squires Co., C. E.
Stratos Div.
Superdraulic Corp.
Swartwout Co.
Taylor Instr. Cos.
Trerice Co. H. O.
Uniflow Valve Corp.
Vickers, Inc.
Wallace & Tiernan
Warren Engrg. Co.
Watts Regulator Co.
Weston Electcl. Instr.

VALVES, Control, Electrically-operated

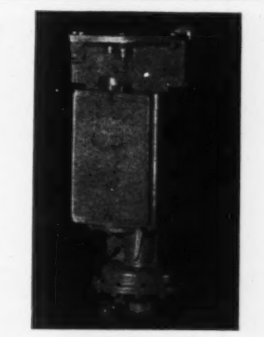
Aero Supply Mfg. Co.
Aeronaut, Robertshaw-Fulton
AiResearch Mfg. Co.
Airmatic Valve, Inc.
Alco Valve Co.
Allen Co., A. K.
American Valve Co.
Annin Co.
A-P Controls Corp
Assoc. Valve & Engrg.
Atkomatic Valve Co.
Atlas Valve Co.
Atwood & Morrill
Autoclave Eng'rs.
Autom. Controls Corp.
Autom. Switch Co.
Autom. Timing & Controls
Automation Prod., Inc.
B-I-F Industries
Baldwin-Lima-Hamilton
Barber-Colman Co.
Barksdale Valves
Beck Co.
Bellows Co.
Bendix Aviation Corp.
Black, Sivalls & Bryson
Bridgeport Thermostat Div.
Bristol Co.
Builders-Providence
Cadillac Gage Co.
Carruthers & Fernandez
Cash Co., A. W.
Clark Controller Co.
Clark Cooper Co.
Conoflow Corp.
Continental Equipt. Co.
Cutler-Hammer, Inc.
Dahl Co., G. W.
Dalmo Victor Co.
Davis Reg. Co.
Defender Instr. & Reg.
Denison Engineering
DeZurik Shower Co.
Distillation Products
Eclipse Fuel Engrg. Co.
Edward Valves, Inc.
Electric Valve Mfg.
Fischer & Porter Co.
Flexible Valve Corp.
Foster Engrg. Co.
Foxboro Co.
Frick Co.
Friez Instrument
Fulton Sylphon Div.
Futurcraft Corp.
Galland-Henning
Gar Prec. Parts, Inc.
General Controls Co.
GE Co.
Gen. Regulator Corp.
Golden-Anderson
Gould Co., J. D.
Grinnell Co., Inc.
Guardian Elec. Mfg.
Hanna Engrg. Works
Hasko Valve & Machine
Hays Corp.
Hays Mfg. Co.
Henry Valve Co.
Hills-McCanna
Humphrey Prod.
Hunt & Son
Hydraulic Controls Co.
Hydraulic Res. & Mfg.
Hydromatics Inc.
Ideal-Aerosmith
Infilco Inc.
Internat. Instr. Co.
Jackes-Evans Mfg. Co.
Jenkins Bros.
Johnson Corp.
Johnson Service
Keckley Co.
Kieley & Mueller
Klipfel Valves
Lear, Inc.
Ledeen Mfg. Co.
Lumenite Electronic
Magnatrol Valve Corp.
Magnetic Industries
Manning, Maxwell & Moore
Marsh Corp., Jas. P.
McDonnell & Miller
Modernair Corp.
Mason-Neilan Div.
Midwestern Instruments
Minneapolis-Honeywell Indust. Div.
Moog Valve Co.
Natl. Aircraft Corp.
National Controls
Nicholson & Co., W. H.
Northern Equipment Co.
P-K Valve Co.
Pegasus Labs.
Penn Electric Switch
Perfex Corp.
Philadelphia Gear Works
Preferred Utilities
Pressure Prod. Industries
R.K.L. Valve
R-P&C Valve Div.
R-S Prod. Corp.
Reliance Instr. Mfg. Corp.
Revere Corp.
Rivett Lathe & Grinder
Robbins Aviation
Rockwell Co. W.S.
Rockwell Mfg Co.
Rockwood Sprinkler
Ross Operating Valve Co.
Sarco Co., Inc.
Schade Valve Mfg. Co.
Schrader's Son, A.
Schutte & Koerting Co.
Security Valve Corp.
Skinner Elec. Valve Div.
Smith Co., S. Morgan
Spence Engrg. Co.
Square D. Co.
Squires Co., C. E.
Standard Controls, Inc.
Supreme Elec. Prods.
Techniflex Corp.
Topp Industries, Inc.
Transval Engrg. Corp.
Trerice Co., H. O.
Vacuum Elec. Engr.
Vacuum Research Co.
Valcor Engrg. Corp.
Valvair Corp.
Versa Prod. Co.
Vickers, Inc.
W-K-M Mfg. Co.
Warren Engrg. Co.
Waterman Engrg. Co.
Wedgeplug Valve
Weston Electd. Instr.
White-Rodgers Elec. Co.
Yellow Springs Inst. Co.

VALVES, Control, Hydraulically-operated

Accessory Prods. Corp.
Acme Industrial
Aero-Coupling Corp.
Aero Supply Mfg. Co.
Aeronaut, Robertshaw-Fulton
Aeroquip Corp.
Air Associates
AiResearch Mfg.
Airmatic Valve, Inc.
Amer. Instr. Co.
Annin Co.
Area Regulators Inc.
Askania Regulator Co.
Assoc. Valve & Engrg.
Atlas Valve Co.
Atwood & Morrill
Auto Control Labs.
Autoclave Engrs.
Automatic Switch
Autom. Timing & Controls
B-I-F Industries
Bailey Meter
Baldwin-Lima-Hamilton
Barber Colman Co.
Barksdale Valves
Bellows Co.
Bendix, Eclipse-Pioneer
Black- Sivalls & Bryson
Bridgeport Thermostat Div.
Bristol Co.
Builders-Providence
Cadillac Gage Co.
Cameron Iron Works
Carruthers & Fernandez
Cash Co., A.W.
Cash Valve Mfg. Corp.
Clark Cooper Co.
Conoflow Corp.
Continental Equipt. Co.
Controls, Inc.
Dahl Co., G.W.
Denison Engineering
DeZurik Shower Co.
Douglass Automatic
Eclipse Fuel Engr.
Edward Valves
Exact Weight Scale Co.
Farris Engineering
Farris Pickering Governor
Farris Valve Corp.
Fisher Governor Co.
Flexible Valve Corp.
Ford Instrument
Foster Engrg. Co.
Fulton Sylphon Div.
Futurcraft Corp.
General Controls
Gen. Regulator Corp.
Golden Anderson
Grinnell Co., Inc.
Guardian Elect. Mfg.
Hagan Corp.
Hammel-Dahl Co.
Hanna Engrg. Works
Hasko Valve & Machine
Hays Corp.
Hills-McCanna
Humphrey Products
Hunt & Son
Hydraulic Controls, Inc.
Hydraulic Res. & Mfg.
Hydromatics Inc.
Infilco Inc.
Jamesbury Corporation
Jenkins Bros.
Johnson Service Co
Jordon Regulator
Keckley Co., O.C.
Kieley & Mueller
Kohler Co.
Lear, Inc.
Ledeen Mfg. Co.
Leslie Co.
Leupold & Stevens
Manning, Maxwell & Moore
Mason-Neilan Div.
McAlear Mfg. Div.
McRae Corp.
Midwestern Instruments
Minneapolis-Honeywell
Moog Valve Co.
Nat'l. Aircraft Corp.
Natural Gas Equipment
P-K Valve Co.
Parsons Co., Ralph M.
Perfex Div.
Philadelphia Gear Works
Phen-Trol Devices
Powers Regulator Co.
Pressure Prods. Industries
R.K.L. Valve & Mfg. Co.
R-S Prod. Corp.
Republic Flow Meters
Republic Mfg. Co.
Rivett Lathe & Grinder
Rockwell Co., W.S.
Rockwell Mfg. Co.
Rockwood Sprinkler
Ross Operating Valve Co.
Sanders Associates
Sarco Co., Inc.
Schade Valve Mfg. Co.
Schutte & Koerting Co.
Seely Instr. Co.
Shallcross Controls
Shand & Jurs Co.
Skinner Elec. Valve Div.
Smith Co., S. Morgan
Spence Engineering
Squires Co., C.E.
Standard Controls, Inc.
Sterling Engrg. Co.
Sundstrand Machine Tool
Superdraulic Corp.
Topp Industries, Inc.
Uniflow Valve Corp.
Vacuum Research Co.
Valcor Engrg. Corp.
Valvair Corp.
Vectron, Inc.
Versa Prod. Co.
Vickers, Inc.
Wallace Tiernan
Warren Engrg. Co.
Waterman Engrg. Co.

VALVES, Control, Pneumatically-operated

Accessory Prods. Corp.
Aero Supply Mfg. Co.
Aeronaut, Robertshaw-Fulton
Airmatic Valve
Allen Co., A.K.
Amer. Instr. Co.
American Meter Co.
Annin Co.
Ashton Valve Co.
Assoc. Valve & Engrg.
Atlas Valve Co.
Atwood & Morrill
Autom. Switch Co.
Automation Prods., Inc.
B-I-F Industries
Bailey Meter Co.
Barksdale Valves
Bellows Co.
Black-Sivalls & Bryson
Bristol Co.
Cameron Iron Works
Carruthers & Fernandes
Cash Co., A. W.
Cash Valve Mfg. Corp.
Century Controls Corp.
Clark Cooper Co.



REPUBLIC REGULATORS

Republic pneumatic or hydraulic type regulators are supplied for the automatic control of pressure, rate of flow, speed of rotation, liquid level, or the proportioning of two pressures, flows, etc., in a fixed ratio.

They measure the quantities they control regardless of the application. They can be made sensitive to changes of less than 0.002 in. of water.

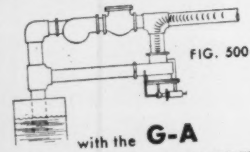
WRITE FOR DATA BOOK No. S-13

REPUBLIC FLOW METERS CO.
2240 Diversey Pkwy. Chicago 47, Ill.

REPUBLIC INSTRUMENTS • CONTROLS

For more information circle **397** on inquiry card.

Anticipate Surge



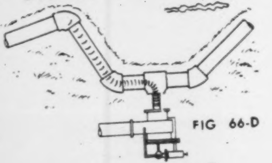
with the G-A

ANTI-SURGE VALVE

Bulletin W-16

Valve opens on pump shut down —before surge occurs. Valve closes slowly at predetermined speed as pressure subsides—but is equipped to reopen for any re-occurring surge symptoms.

Relieve Surge



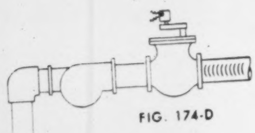
with the G-A

SURGE RELIEF VALVE

Bulletin W-2

When surges are initiated by the gradient of the pipe line, or by quick shut-off in the line, the pipe is protected and relief provided by G-A Surge relief valves.

Prevent Surge



with the G-A

ELECTRIC CHECK VALVE

Bulletin W-10

Electrically operated, the valve does not open until the pump comes up to speed, closes 95% before switch automatically shuts down pump.

Technical bulletins—numbered above—contain complete descriptive information. Your copies available on request.

GOLDEN ANDERSON
Valve Specialty Company
1286 RIDGE AVE. • PITTSBURGH 33, PA.

For more information circle 428 on inquiry card.

Conoflow Corp.
Continental Equipt.
Copes Vulcan Div.
Dahl Co., G. W.
Davis Regulator
DeZurik Shower Co.
Edward Valves
Farris Engrg. Corp.
Fischer & Porter Co.
Fisher Governor Co.
Foster Engrg. Co.
Foxboro Co.
Fulton Sylphon Div.
Futurecraft Corp.
Galland-Henning
Gar Prec. Parts, Inc.
General Controls Co.
Genl. Regulator Corp.
Golden-Anderson
Grinnell Co.
Hanna Engrg. Works
High Pressure Equip.
High Vacuum Equipt. Corp.
Hills-McCanna
Houston-Fearless
Hoke, Inc.
Humphrey Prod.
Hunt & Son, Inc.
Hydraulic Res. & Mfg.
Hydromatics Inc.
Indust. Engrg. Corp.
Infilco Inc.
Jamesbury Corp.
Johnson Service Co.
Jordan Regulator Corp.
Keckley Co., O. C.
Kieley & Mueller
Kinney Mfg. Div.
Klipfel Valves
Kohler Co.
Ledeen Mfg. Co.
Leslie Co.
Mason-Neilan Div.
McAlear Mfg. Co.
Mead Specialties Co.
Minneapolis-Honeywell
  Indust. Div.
Modernair Corp.
Natl. Aircraft Corp.
National Pneumatic Co.
Natural Gas Equipt.
Norgren Co., C. A.
Powers Regulator Co.
Pressure Prod. Industries
R. K. L. Valve & Mfg. Co.
Republic Flow Meters
Research Controls
Rivett Lathe & Grinder
Rockwell Co., W. S.
Rockwell Mfg. Co.
Ross Operating Valve Co.
Schrader's Son, A.
Schutte & Koerting
Security Valve Corp.
Seely Instr. Co.
Skinner Elec. Valve Div.
Smith Co., S. Morgan
Spence Engrg. Co.
Squires Co., C. E.
Stratos Div.
Taylor-Emmett Controls
Taylor Instr. Cos.
Uniflow Valve Corp.
Valcor Engrg. Corp.
Valvair Corp.
Versa Prods Co.
Wallace & Tiernan
Warren Engrg. Co.
Westinghouse Air Brake Co.
Weston Elect. Inst.

VALVES, Diaphragm Seal, including Saunders Patent, Crane, Wynn Type, etc.

Aero Supply Mfg. Co.
Assoc. Valve & Engrg.
Autom. Switch Co.
Balfor Industries
Black, Sivalls & Bryson
Bristol Co.
Conoflow Corp.
Dahl Co., G. W.
Farris Engrg. Corp.
Foxboro Co.
General Controls Co.
Grinnell Co.
Hill Prods. Co., Inc.
Hills-McCanna Co.
Hoke, Inc.
High Vacuum Equip.
Humphrey Products
Kieley & Mueller
Mason-Neilan Div.
Minneapolis-Honeywell
Rockwell Co., W. S.
Simmonds Aerocessories
Stockdale Engrg. Co.
Swanson Engrg. & Mfg.
Trerice Co., H. O.
Uniflow Valve Corp.
Weston Elect. Inst.

VALVES, Flexible Sleeve

Autom. Switch Co.
Farris Engrg. Corp.
Internat. Instr. Co.
Keckley Co.
R.K.L. Valve & Mfg. Co.
Research Controls
Rockwell Co., W.S.

VALVES, Float-operated

Accessory Prods. Corp.
Aero Supply Mfg. Co.
Anderson Co., V.D.
Assoc. Valve & Engrg.
Atlas Valve Co.
Atwood & Morrill
Black, Sivalls & Bryson
Clark Cooper Co.
Davis Regulator
Defender Instr. & Reg.
Fisher Governor
Foster Engrg. Co.
Frick Company
Fulton Sylphon Div.
Golden-Anderson
Jordan Regulator Co.
Keckley Co., O. C.
Kieley & Mueller, Inc.
Klipfel Valves
Phillips & Co., H. A.
McAlear Mfg. Co.
McDonnel & Miller, Inc.
Phillips & Co., H. A.
R.K.L. Valve & Mfg. Co.
Revere Corp. of Amer.
Rockwell Co., W.S.
Schade Valve Mfg.Co.
Smith Co., S. Morgan
Spence Engrg. Co.
Vanton Pump & Equipt.
Warren Engrg. Co.
Watts Regulator Co.

VALVES, Gage Cocks

Accessory Prods. Corp.
Assoc. Valve & Engrg.
Circle Seal Prods.
Crosby Steam Gage & Valve
Defender Instr. & Reg.
Grove Valve & Reg. Co.
Jerguson Gage
Keckley Co., O. C.
Manning, Maxwell & Moore
Marsh Corp., Jas. P.
Metal Goods Corp.
Reliance Gauge Column
Republic Mfg. Co.
Strahman Valves, Inc.
Trerice Co., H. O.
U. S. Gauge Div.
Weatherhead

VALVES, High Pressure

Accessory Prods. Corp.
Airmatic Valve
Amer. Instr. Co.
Annin Co.
Assoc. Valve & Engrg.
Atkomatic Valve Co
Atlas Valve Co.
Atwood & Morrill
Autoclave Engrs.
Autom. Switch Co
Autom. Timing & Controls
Automation Prod., Inc.
Bailey Meter Co.
Barksdale Valves
Bastian-Blessing
Black, Sivalls & Bryson
Bridgeport Thermostat
Carruthers & Fernandez
Cash Co., A. W.
Cash Valve Mfg. Co.
Circle Seal Prods.
Clark Cooper Co.
Conoflow Corp.
Consol. Electrodynamics
Crosby Steam Gage
Dahl Co., G. W.
Davis Regulator
DeZurik Shower Co.
Dragon Engrg. Co.
Eastern Aircraft Prod.
Edward Valves, Inc.
Farris Engrg. Corp.
Fisher Governor Co
Foster Engrg. Co.
Foxboro Co.
Frick Company
Fulton Sylphon Div.
Futurecraft Corp.
Gar Prec. Parts, Inc.
General Controls Co.
Gould Co., J. D.
Grinnell Co.
High Pressure Equipt. Co.
High Vacuum Equip.
Hoke, Inc.
Houston-Fearless
Hunt & Son, Inc.
Hydromatics Inc.
Imperial Brass Mfg.
Jamesbury Corp.
Kieley & Mueller
Leslie Co.
Manning, Maxwell & Moore
Marsh Corp., Jas. P.
Mason-Neilan Div.
Minneapolis-Honeywell
  Indust. Div.
N. R. C. Equip. Corp.
Natl. Aircraft Corp.
National Controls
Pressure Prod. Industries
R-P & C Valve Div.
Republic Flow Meters
Republic Mfg. Co.
Research Controls
Robbins & Assocs.
Robbins Aviation
Robertshaw-Fulton Conts.
Rockwell Co., W. S.
Ruska Instr. Corp.
Schutte & Koerting
Scientific Inst. Dev.
Security Valve Corp.
Seely Instr. Co.
Skinner Elec. Valve Div.
Smith Co., S. Morgan
Spence Engrg.Co.
Squires Co., C.E.
Stratos Div.
Superdraulic Corp.
Taylor-Emmitt Controls
Trerice Co., H. O.
Uniflow Valve Corp.
Veeco Vacuum Corp.
Waterman Engrg. Co.

VALVES, Lubricated Plug

ACF Industries, Valve Div.
Accessory Prods. Corp.
Acme Industrial
Airmatic Valve
Amer. Meter Co.
Circle Seal Prods
Conant Bros. Co.
Conoflow Corp.
Dragon Engrg. Co.
Eclipse Fuel Engrg. Co.
General Controls
Imperial Brass Mfg. Co.
Kohler Co.
Kontes Glass
Ledeen Mfg. Co.
Leslie Co.
Minneapolis-Honeywell
  Indust. Div.
Parker Appliance
Republic Mfg. Co.
Rockwell Mfg. Co.
Vanton Pump & Equipt.
W-K-M Mfg. Co.
Wabash Metal Prod.

VALVES, Needle

Accessory Prods. Corp.
Allen Co., A. K.
Amer. Instr. Co.
Amer. Meter Co.
Annin Co.
Assoc. Valve & Engrg.
Autoclave Engrs.
Autom. Switch Co.
Bailey Meter Co.
Baldwin-Lima-Hamilton
Bastian-Blessing
Clark Cooper Co.
Conoflow Corp.
Dahl Co., G. W.
Dragon Engrg. Co.
Edward Valves, Inc.
Fisher Governor Co.
Foxboro Co.
Fulton Sylphon Div.
Futurecraft Corp.
Greiner Co., Emil
Grove Valve & Reg. Co.
Hagan Chem. & Controls
Henry Valve Co.
High Pressure Equipt. Co.
Hoke, Inc.
Ideal-Aerosmith
Imperial Brass
James-Pond-Clark
Jerguson Gage
Kohler Co.
Lab. Furniture Co.
Leslie Co.
Manning, Maxwell & Moore
Manostat Corp.
Marsh Corp., Jas. P.
Medical Electronics Div.
Minneapolis-Honeywell
Norgren Co., C. A.
Parr Instr. Co.
Pneu-Trol Devices
Pressure Prod. Industries
R-P & C Valve Div.
Republic Mfg. Co.
Research Controls
Reynolds Gas Reg. Co.
Robbins & Assocs.
Robbins Aviation
Rockwell Mfg. Co.
Ruska Instr. Corp.
Trerice Co., H. O.
Uniflow Valve Corp.
Vickers, Inc.
Weatherhead Co.

VALVES, Non-Lubricated Plug

Automatic Switch
Conant Bros. Co.
Dahl Co., G. W.
Defender Instr. & Reg.
DeZurik Shower Co.
Hasco Valve & Machine
Kohler Co.
Manning, Maxwell & Moore
Minneapolis-Honeywell
Mueller Co.
Republic Mfg. Co.
Wedgeplug Valve Co.

VALVES, Packless

Accessory Prods. Corp.
Allen Co., A. K.
Annin Co.
Assoc. Valve & Engrg.
Atkomatic Valve Co.
Atwood & Morrill
Autom. Switch Co.
Barber-Colman Co.
Bastian-Blessing
Black, Sivalls & Bryson
Clifford Mfg. Co.
Conoflow Corp.
Cooper Co., Clark
Dahl Co., G. W.
Defender Instr. & Reg.
Foxboro Co.
Fulton Sylphon Div.
Galland-Henning
General Controls
Grinnell Co.
Hanna Engrg. Works
Hills-McCanna Co.
Hoke, Inc.
Humphrey Products
Imperial Brass
Jordan Regulator Co.
Kinney Mfg. Div.
Kieley & Mueller
Marsh Corp. Jas. P.
Mason-Neilan Div.
Medical Electronics Div.
Powers Regulator Co.
Pressure Prods. Industries
R.K.L. Valve & Mfg. Co.
Research Controls
Robbins Aviation
Robertshaw-Fulton Conts.
Sarco Co., Inc.
Skinner Elec. Valve Div.
Spence Engrg. Co.
Squires Co., C.E.
Uniflow Valve Corp
Veeco Vacuum Corp.
Wabash Metal Prod.

VALVES, Pressure Reducing and/or Back-Pressure, see Valves, Control

VALVES, Relief and Safety

Accessory Prods. Corp.
Adel Precision Prods.
Aeronaut., Robertshaw-
  Fulton
Airmatic Valve
Amer. Instr. Co.
Amer. Meter Co.
Assoc. Valve & Engrg.
Atkomatic Valve
Atlas Valve Co.
Atwood & Morrill
Autoclave Engrs.
Autom. Switch Co.
Bastian-Blessing
Bendix, Pioneer-Central
Carruthers & Fernandez
Cash Valve Mfg. Corp.
Circle Seal Prods.
Clark Controller
Clark Cooper Co.
Crosby Steam Gage
Davis Regulator
Eastern Aircraft Prod.
Edward Valves, Inc.
Farris Engrg. Corp.
Foster Engrg. Co.
Frick Co.
Fulton Sylphon Div.
Gar Prec. Parts, Inc.
Golden-Anderson
Hoke, Inc.
Hydraulic Res. & Mfg.
James-Pond-Clark
Jordan Regulator Co.
Keckley Co., O.C.
Klipfel Valves
Kohler Co.
Lapp Insulator Co.
Lear, Inc.
Leslie Co.
Manning, Maxwell & Moore
Marine & Indust. Prod.
McAlear Mfg. Co.
McDonnell & Miller, Inc.
Metal Goods Corp.
Micromat Co.
Mueller Co.
Norgren Co., C. A.
Pressure Prod. Industries
Propulsion Dev. Labs.
R. K. L. Valve Mfg. Co.
Republic Mfg. Co.
Research Controls
Reynolds Gas Reg. Co.
Rivett Lathe & Grinder
Robertshaw-Fulton Conts.
Rockwell Co., W. S.
Roy Co., Milton
Schutte & Koerting
Security Valve Corp.
Shand & Jurs Co.
Smith Co., S. Morgan
Squires Co., C. E.
Stratos Div.
Superdraulic Corp.
Trerice Co., H. O.
Vapor Recovery Systems Co.
Viking Insts.
Wabash Metal Prod.
Warren Engrg. Co.
Watts Regulator Co
Westinghouse Air Brake Co.

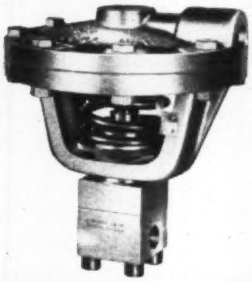
VALVES, Saunders Patent Type, see Valves, Diaphragm Seal

VALVES, Slurry, see Valves, Flexible Sleeve

VALVES, Solenoid-operated

A-P Controls Corp.
Accessory Prods. Corp.
Adel Precision Prods.
Aero Supply Mfg. Co.
Aeronaut., Robertshaw-
  Fulton
AiResearch Mfg. Co.
Airmatic Valve, Inc.
Allen Co., A. K.
Assoc. Valve & Engrg.
Atkomatic Valve Co.
Atwood & Morrill
Autom. Controls Corp.
Autom. Switch Co.
Automation Prod., Inc.
Barksdale Valves
Baso, Inc.
Bellows Co.
Bridgeport Thermostat
Brodie Co., Ralph N.
Carruthers & Fernandez
Century Controls Corp.
Clark Controller Co
Clark Cooper Co.
Davis Regulator
Eastern Aircraft Prod.
Eckel Valve Co.
Eclipse Fuel Engrg. Co.
Electronics Corp. of Amer.
Electro-Tech Equip.
Exact Weight Scale Co.
Farris Engrg. Corp.
Fischer & Porter Co.
Foster Engrg. Co.
Frick Company
Futurecraft Corp.
General Controls Co.
Golden-Anderson
Gould Co., J. D.
Grinnell Co.
Guardian Elect. Mfg. Co.
Hanna Engrg. Works
Hays Mfg. Co.
Hill & Co., E. Vernon
Humphrey Prods.
Hunt & Son, Inc.
Hydraulic Controls Co.
Hydromatics Inc.
Jackes-Evans Mfg. Co
Jamesbury Corp.
Johnson Corp.
Johnson Service Co.
Keckley Co., O. C.
Kohler Co.
Leslie Co.
Magnatrol Valve Corp.
Marsh Corp., Jas. P.
McDonnell & Miller, Inc.
Mead Specialties Co.
Minneapolis-Honeywell
  Indust. Div.
Modernair Corp.
Natl. Aircraft Corp.
National Pneumatic Co.
Nicholson & Co., W. H.
Pressure Prod. Industries
R. K. L. Valve & Mfg. Co.
Rivett Lathe & Grinder
Rockwell Co., W. S.

MINIATURIZATION From Pilot Plant to Process



←

"BANTAM" 500 SERIES VALVE

Throttling "Bantam" Diaphram Control Valves for all standard control valve uses, Cv of 0.6 and below, up to 1000 psi and 500°F, characterized, renewable trim, 316 stainless steel and *Teflon* only wetted surfaces, low in hysteresis size and weight, 2000 series "Bantam" Control Valves available for on-off service.

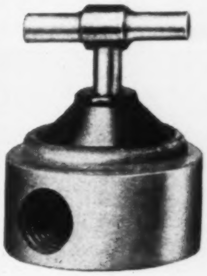
MINIATURE DIAPHRAGM OPERATED SHUT OFF VALVE

Body PVC, diaphragm neoprene, diaphragm head aluminum. Body and operator 2" dia. x 1¾" high. (⅛ or ¼ NPT).

→

"DEMI" PACKLESS VALVE

For services when packing is a problem, manifolding of small valves in one unit at low cost. For services up to 750 psi and 500°F, screw, toggle, or diaphragm operated, the "DEMI" line is ideal for panel mounting up to five valves in one block.



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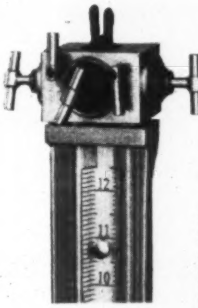
"DEMI 54"

5 Valve Manifold for integral mounting on cleanout type Manometer. Packless design, 2 shut off valves, one bypass valve, 2 vent valves. Other 3 or 5 valve models available with or without special manometer mounting.



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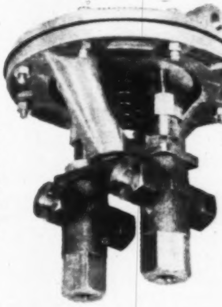
WHIFFLETREE OPERATOR

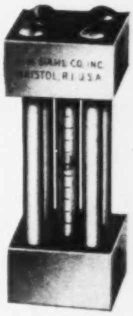
Two valves operated simultaneously by one operator. Valves may be globe or three-way and have a multitude of piping arrangements for mixing and routing applications.

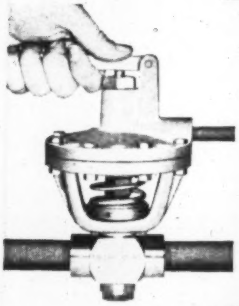


→

AIR RATE INDICATOR

Top and bottom housing, 1¼" square anodyzed aluminum barstock, combination column studs and gauge protection. The ⅛" IPS ports may be relocated by removing column studs and rotating top or bottom housing. Standard calibration indicates 0 to 2 standard cubic ft. per hour of air. Other models available with built-in toggle actuated packless valves or needle type valves for precise control or special porting or additional ports to suit your requirements.





←

MANUAL RESET

Wherever control air on danger-out or toxic process flows must be blocked for safety, on air failure until manually reset, these valves insure against disaster. Standard sizes ¼" and ½" I.P.S.

↑

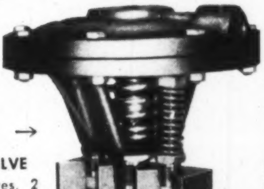
SAUNDERS VALVE, AIR OPERATED

Plastic valve, 2" and below, metal valve 1" and below. G. W. Dahl Co., Diaphragm Operators on these valves provide simple, sure automatic operation. Each application must submit full flow information.

→

MINIATURE THROTTLING CONTROL VALVE, TOP MOUNTED MOORE POSITIONER

Compact, accurate rugged. High lift, positioning accuracy, low cost, and low in weight and size. Body, bonnet and blind head of barstock construction. Valve sizes up to 1", screwed or flanged. Trim Cv, 12.0 to 0.001. Pressures, 0 to 2000 psi. Temperatures, Minus 400 to Plus 1000°F.



→

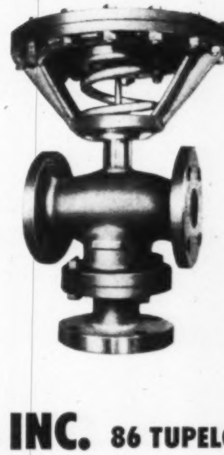
BLOCK VENT VALVE

3 balanced valves, 2 reverse acting and 1 direct acting, actuated by one operator. With 0 to 3 psi control air, the 2 reverse acting valves are closed, center valve vented. At 6 psi control air, all valves closed. At 12 to 15 psi, the 2 reverse acting valves are open and the vent valve is closed, allowing free flow through body. Design pressure 1000 psi. *Teflon*, Chevron packing. *Teflon* seating for tight shut off.

→

DIAPHRAGM OPERATED 3-WAY CONTROL VALVE

Aluminum diaphragm operator, stainless steel body and trim, *Teflon* packing with *Teflon* seating for tight shut off. Available up to 2", flanged or screwed.



MINIMUM DISPLACEMENT PACKLESS VALVE

Designed specifically for minimum hold-up in valving capillary tubing. 1¼" dia. body available with special bonnet for solenoid or diaphragm operation, or hand operation.

REPRESENTATIVES IN PRINCIPAL CITIES
Write us for complete technical information, or
for the address of our representative in your area.

GEORGE W. DAHL COMPANY, INC. 86 TUPELO STREET, BRISTOL, R. I.

For more information circle **398** on inquiry card.

LING the leader in...
RANDOM NOISE
Vibration Test Systems

High-power, electronically driven equipment and systems for random and sine wave vibration testing.

LING ELECTRONICS INC.
(FORMERLY L. M. ELECTRONICS)
5120 West Jefferson Boulevard
Los Angeles, California

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Ross Operating Valve Co.
Sarco Co.
Schrader's Son, A.
Schutte & Koerting
Security Valve Corp.
Skinner Elec. Valve Div.
Smith Co., S. Morgan
Spence Engrg. Co.
Stratos Div.
Squires Co., C. E.
Taylor-Winfield Corp.
Trerice Co., H. O.
Valcor Engrg. Corp.
Valvair Corp.
Veeco Vacuum Corp.
Versa Prods. Co.
Vickers, Inc.
Wallace & Tiernan
Waterman Engrg. Co.
Westinghouse Air Brake Co.

VALVES, Solenoid-pilot controlled

Adel Precision Prods.
Aeronaut., Robertshaw-Fulton
Airmatic Valve, Inc.
Allen Co., A. K.
Annin Co.
Assoc. Valve & Engrg.
Atkomatic Valve Co.
Atwood & Morrill
Autom. Switch Co.
Automation Prod., Inc.
Barksdale Valves
Bellows Co.
Bridgeport Thermostat
Carruthers & Fernandez
Century Controls Corp.
Clark Controller Co.
Clark Cooper Co.
Dahl Co., G. W.
Davis Regulator
DeZurick Shower Co.
Eclipse Fuel Engrg. Co.
Electro-Tech Equip.
Fischer & Porter Co.
Foster Engrg. Co.
Foxboro Co.
Frick Company
Futurecraft Corp.
Galland-Henning
General Controls Co.
Golden Anderson
Gould Co., J. D.
Hanna Engrg. Works
Hays Mfg. Co.
Hill & Co., E. Vernon
Humphrey Products
Hunt & Son, Inc.
Hydraulic Controls Co.
Hydraulic Res. & Mfg.
Hydromatics Inc.
Jackes-Evans Mfg. Co.
Jordan Corp.
Keckley Co., O. C.
Kieley & Mueller
Kohler Co.
Ledeen Mfg. Co.
Leslie Co.
Magnatrol Valve Corp.
Manning, Maxwell & Moore
Marsh Corp., Jas. P.
Minneapolis-Honeywell Indust. Div.
Modernair Corp.
Natl. Aircraft Corp.
National Pneumatic Co.
Nicholson & Co., W. H.
Pegasus Labs.
R. K. L. Valve & Mfg. Co.
Rivett Lathe & Grinder
Rockwell Co., W. S.
Ross Operating Valve Co.
Schrader's Son, A.
Schutte & Koerting
Security Valve Corp.
Skinner Elect., Valve Div.
Smith Co., S. Morgan
Spence Engrg. Co.
Squires Co., C. E.
Superdraulic Corp.
Taylor-Winfield Corp.
Uniflow Valve Corp.
Valcor Engrg. Corp.
Valvair Corp.
Versa Prods. Co.
Westinghouse Air Brake Co.

VALVES, Toggle

Accessory Prods. Corp.
Bastian-Blessing
Dahl Co., G. W.
Futurecraft Corp.
Hoke, Inc.
Imperial Brass
Manostat Corp.
National Pneumatic Co.
RKL Valve & Mfg.
Ross Operating Valve Co.
Schrader's Son, A.
Schutte & Koerting

VAPOR TRANSMISSION TESTERS

Atmosphere Control
Testing Machines, Inc.
Thwing-Albert Instr. Co.
U. S. Testing Co.

VARISTORS

Bradley Labs
GE
GE Metall. Prods. Div.
Internat. Resistance Co.
Radio Receptor Co.
Schauer Mfg.
Sylvania Elect. Prods.
Union Switch & Signal
Victory Engrg. Corp.

VARMETERS see Volt—Ampere Meters, Reactive

VARNISHES, Amber

Bakelite Corp.
Blossom Mfg. Co.
Lawter Chemicals
Maas & Waldstein
Sullivan Varnish Co.

VARNISHES, Insulating

Acme Wire Co.
Bakelite Div.
Biggs Co., Carl H.
Blossom Mfg. Co.
Borden Co.
Continental-Diam. Fibre
Dolph, John C.
Dow Corning
DuPont
Durez Plastics & Chem.
Emerson & Cuming
GE
Insulation Mfgrs.
Maas & Waldstein
Martindale Electric
Mitchell Rand Insulating
Sherwin-Williams
Silicones Div.
Westinghouse Electric

VEHICLE TRAVEL RECORDERS, see Mileage Indicators

VELOCITY INSTRUMENTS, see Speed

VENTURI METERS, see Flowmeters, Inferential

VENTURI TUBES (see also Flowmeters, Venturi)

Ace Glass, Inc.
B-I-F Industries
Bailey Meter Co.
Bristol Co.
Foxboro Co.
Infilco Inc.
Penn Insts. Div.
Prec. Glass Prods. Co.
Simplex Valve & Meter Co.

VIALS, Level

Bache & Company, Semon
Canadian Rad. & Uran.
Chaolux & Co.
Disston & Sons, Inc.
Ferner Co.
Fish-Schurman
Gaertner Scientific Corp.
Geier & Bluhm, Inc.
Gurley, W. & L. E.
Stanley Tools
Starrett Co., L. S.
Warren-Knight Co.

VIBRATION INSTRUMENTS, Indicators and/or Recorders

ACF Electronics Div.
Advanced Electronics Inc.
Aero Elcetronics
Airborne Instruments Lab.
Allegany Instr. Co.
Allied Engrg. Div.
Arnoux Corp.
Askania-Werke A. G.
Atlantic Research
Authorized Mfrs. Service
Barry Controls
Bendix Aviation Corp.
Bronoptics Co.
Brush Electronics
Calidyne Co.
Carroll Co.
Century Geophysical
Chesapeake Instr. Corp.
Consolidated Avionics
Consol. Electrodynamics
Control Devices Inc.
Crescent Engrg. & Res. Co.
Daytronic Corp.
Diatron Co.
Dice Co., J. W.
Eastern Prec. Resistor
Edin Co., Inc.
Electro-Mech. Res.
Electro Products Labs.
Electronic Engrg. Serv.
Endevco Corp.
Engrg. Research & Dev
Epic Inc.
Erwood, Inc.
Feiler Engrg. & Mfg. Co.
Fielden Instrument
Fluke Mfg. Co.
Franklin Electronics
Furst Electronic
G E, Apparatus Sales
General Radio Co.
Geotechnical Corp.
Gilmore Industries
Hathaway Instr. Co.
Heiland Div.
Hickok Elec. Instr.
Impact-O-Graph Corp.
Impact Register Co.
Indikon Co.
Industrial Electronics
Industrial Res. & Dev.
Insco Company
Internat. Res. & Dev. Corp.
Jarco Services, Inc.
Kahn & Co., Inc.
Kay Electric
Kistler Instr. Co.
Krohn-Hite Instr. Co.
Kybernetes Corp.
Lab-Tronics
Lance Prods
Ling Electronics
MB Mfg. Co.
Magnetic Instr. Co.
Massa Labs.
Maxson Instr. Div.
Midwestern Instruments
Muirhead Instrument
Nankervis Co.
Neutronics Research
Offner Electronics Inc.
Optronic Co.
Panoramic Radio Prod.
Phototron Inst. Corp.
Pickard & Burns
Raytheon Mfg. Co.
Scott, Hermon Hosmer
Sheffield Corp.
Southwestern Ind. Elec.
Sperry Gyroscope Co.
Starrett Co., L. S.
Statham Labs.
Techno Inst. Co.
Tel-Instr. Elects. Corp.
Texas Div., Brush
Thordarson-Meissner
U. S. Electronics
Vibra Shock Corp.
Victoreen Instr. Co.
WacLine, Inc.
West Coast Electronics
Westberg Mfg. Co.
Western Radiation Lab.
Westinghouse Electric
Westronics, Inc.
Walkirt Co.
Wiancko Engineering
Yellow Springs Inst.

VIBRATION ISOLATORS, see Mountings, Shock and Vibration Absorbing

VIBRATION PICKUPS

Amer. Gyro Corp.
Amperite Co.
Askania-Werke A. G.
Atlantic Research
Bendix Aviation, Pacific
Boekel & Co.
Bourns Labs.
Brush Electronics
Calidyne Co.
Carroll Co.
Cheasapeake Inst. Corp.
Consol. Electrodynamics
Corbett Science Labs.
Crescent Engrg. & Res. Co.
Crystal Research Labs.
Donner Scientific
Du Mont Lab., Allen B.
Edcliff Instruments
Electronic Engrg.
Electro Products Labs.
Electro Voice
Endevco Corp.
Engineering Res. & Dev.
Epic, Inc.
Erwood, Inc.
Fielden Instr. Div.
GE Apparatus Sales
General Radio Co.
General Scientific Div.
Genisco, Inc.
Georator Corp.
Geotechnical Corp.
Giannini, G. M.
Globe Phone Mfg.
Haines Designed Prod.
Hamilton Watch
Hathaway Instr. Co.
Heiland Div.
Industrial Electronics
Internat. Res. & Dev. Corp.
Kistler Instr. Co
Lab-Tronics
M B Mfg. Co.
Massa Labs.
Minatron Corp.
Neutronics Research
North American Instrs.
Optron Corp.
Optronic Co.
Phillips Petroleum
Schaevitz Engineering
Scientific Enterprises
Scott, Hermon Hosme
Shure Brothers
Southwestern Ind. Elec.
Sperry Gyroscope Co
Statham Laboratories
Telex, E-A Div.
Tel-Instr. Electrs. Corp.
Texas Div., Brush
Vibra Shock Corp.
WacLine, Inc.
Westinghouse Electric
Wiancko Engrg. Co.

VIBRATION TEST EQUIPMENT, including Shake Tables

All Amer. Tool & Mfg.
Amthor Testing Inst. Co.
Asch Equipment Co.
Askania-Werke A. G.
Associated Research
Atlantic Research Corp.
Baldwin-Lima-Hamilton
Biddle Co.
Brush Electronics
Calidyne Co.
Carroll Co.
Century Geophysical
Chadwick-Helmuth Co.
Consol. Electrodynamics
Commercial Research
Electro-Mec Lab.
Electro-Products Lab.
Endevco Corp.
Engineering Res. & Dev.
Erwood, Inc.
Ferner Co.
Fielden Instrument
GE, Apparatus Sales
General Radio
Genisco Inc.
Geotechnical Corp.
Hacker & Co.
Hathaway Instr. Co.
Heiland Div.
Insco Co.
Internat. Res. & Dev. Corp.
Kay Electric Co.
Krouse Testing Machine
Lance Prod.
L.A.B. Corp
Ling Electronics
Litton Ind. of Md.
M. B. Mfg. Co.
Massa Labs.
Martin-Hubbard Corp.
New Brunswick Scient. Co.
RCA Div.
Rollin Co.
Southw. Indust. Electronic
Statham Devel. Corp.
Sticht Co.
Technical Prods. Co.
Techno Inst. Co.
Tel-Instr. Electrs. Corp.
Temperature Engrg.
Testing Machines, Inc.
Walkirt Co.
Westinghouse Electric

VIBROGRAPHS

Askania-Werke A. G.
Baldwin-Lima-Hamilton
Cambridge Instr. Co.
Central Scientific Co.
Chicago Apparatus Co.
Commercial Research
Epic, Inc.
Hamilton Watch
Heiland Div.
Impact Register Co.
International Res. & Dev.
RCA Div.
Standard Science Supply
Vibration Specialty
Welch Mfg. Co., W. M.

VIBROMETERS

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Amer. Instr. Co.
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Associated Research
Chesapeake Instr.
Electrocon Corp.
Epic, Inc.
GE, Apparatus Sales
Haines Designed Prod.
Hamilton Watch
Hathaway Instr. Co.
Heiland Div.
International Res. & Dev.
Lab-Tronics
M.B. Mfg. Co
Martin-Hubbard Corp.
Massa Labs.
Scott, Inc, Hermon
Sticht Co.
Vibration Specialty
Walkirt Co.
Western Radiation Lab.
Westinghouse Electric

VIBROSCOPES

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Airborne Instruments
Amperite Corp.
Brush Electronics
Bush Asso., G. F.
Carroll Co.
Century Geophysical
Chesapeake Instr.
Coleman Instr. Co.
Commercial Engrg. Labs
Daytronic Corp.
Electro Products Labs.
Fisher Research Lab.
GE, Apparatus Sales
Hamilton Watch
Heiland Div.
Humboldt Mfg. Co.
Insco Company
International Res. & Dev.
Lab-Tronics
M.B. Mfg. Co.
Massa Labs.
Sprengnether Instr Co.
Varo Mfg. Co.
Western Radiation Lab.
Wood Counter Labs.

VICAT NEEDLES, see Needles, Vicat

VISCOSIMETER BATHS, Constant-Temperature

Ace Glass
Amer. Instr. Co.
American Research Corp.
Apex Scientific
Barnstead Still
Brabender Corp.
Cannon Instr. Co.
Central Scientific Co.
Chicago Surgical & Elec.
Coleman Instr. Co.
Drage Products
Eitzen Co.
Electric Hotpack Co.
Fish-Schurman Corp.
Fisher Scientific Corp.
Gardner Lab.
Greiner Co., Emil
Hallikainen Insts.
Humboldt Mfg. Co.
Kahn & Co.
Koehler Instr. Co.
Labline, Inc.
LaPine & Co.
Modern Electrical Lab.
Modern Lab Equipt. Co.
Palo Lab. Supplies
Philadelphia Scientific
Powers Regulator Co.
Precision Scientific Co.
Process & Instruments
Refrigeration Systems
Research Specialties
Ruska Instruments
Sargent & Co., E. H.
Scientific Glass App.
Technical Equip. Co.
Tenney Eng.
Thwing-Albert
Wilkens-Anderson
Zeiss Inc., Carl

VISCOSIMETER (For Plastic Flow Fluids)

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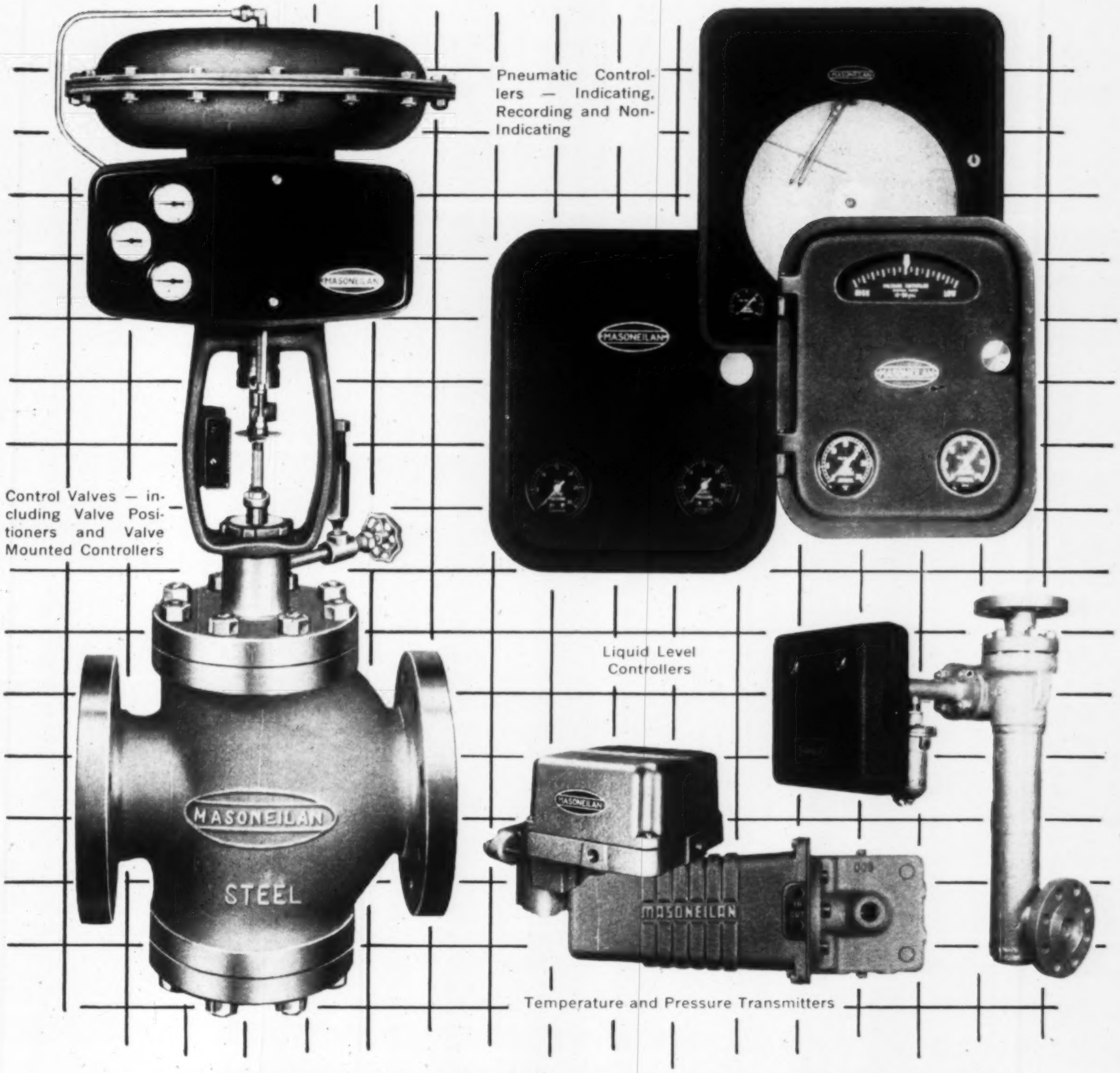
Apex Scientific
Bendix Aviation Corp.
Brabender Instrs., C. W.
Brookfield Engrg. Labs.
Burrell Corp.
Cannon Instr.
Drage Products
Electro-Physics Co.
Ferranti Electric
Fischer & Porter Co.
Fish-Schurman Corp.
Gardner Lab.
GE, Apparatus Sales
Hagan Corp.
Indust. Test Equipt. Co.
Kontes Glass
Minneapolis-Honeywell, Boston Div.
Norcross Corp.
Precision Scientific Co.
Process & Instruments
Scientific Instr. Co.
Southwestern Ind. Elec.
Sunshine Scientific
Testing Machines, Inc.

VISCOSIMETERS, including Brookfield, Engler, Fenske, Ford (for Paint), Hoeppler, MacMichael, Ostwald, Redwood, Scott, Storme, Ubbelohde

Ace Glass
Aloe Co., A. S.
American Inst. Co.
Bendix Aviation Corp.
Berkeley Div.
Boekel & Co.
Brabender Corp.
Bristol Co.
Brookfield Engrg. Labs.
Cannon Instr. Co.
Central Scientific
Coleman Insts. Inc.
Eitzen Co., L. C.
Ferranti Electric
Fish-Schurman
Fisher Scientific
Foxboro Co.
Gaertner Scient. Corp.
Gardner Lab.
Gerin Corp.
Greiner Co., Emil
Hagan Chem. & Controls
Hiergesell & Sons
Humboldt Mfg. Co.
Indust. Test Equipt. Co.
Industro-Scientific Co.
Instr. Devel. & Mfg. Corp.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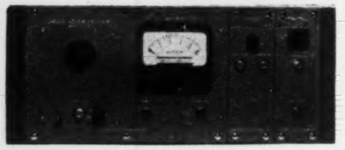

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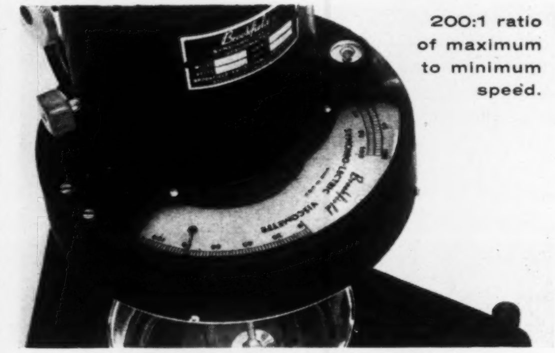

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Scientific Instr. Co.
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VISCOSIMETERS, Kinematic

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American Instr. Co.
Apex Scientific
Cannon Instr. Co.
Ferranti Electric
Fisher Scientific
Gardner Lab.
Greiner Co., Emil
Hallikainen Insts.
Hiergesell & Sons
Indust. Test Equipt. Co.
Koehler Instr. Co.
Kontes Glass
Labline, Inc.
Modern Lab. Equipt. Co.
Nankervis Co.
Precision Scientific Co.
Scientific Development
Scientific Glass App.
Technical Equipt. Co.

VISCOSIMETERS, Recording

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Brabender Corp.
Bristol Co.
Brookfield Engrg. Labs.
Coleman Insts. Inc.
Drage Products
Electro-Physics Co.
Fischer & Porter
Gaertner Scientific
Hallikainen Inst.
Hayes Scientific App.
Instrument Dev. Labs.
Indust. Test Equipt. Co.
Minneapolis-Honeywell, Boston Div.
Norcross Corp.
Precision Scientific

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Amer. Instr. Co.
Boekel & Co.
Bristol Co.
Central Scientific
Corning Glass Works
Eltzen Co., Louis C.
Fisher Scientific
Greiner, Emil
Hallikainen Insts.
Hiergesell & Sons
Humboldt Mfg. Co.
Kimble Glass
Koehler Instr. Co.
Kontes Glass
Labline, Inc.
Monarch Mfg. Wks.
Owens-Illinois Glass
Precision Scientific
Sargent & Co., E. H.
Scientific Glass App.
Zuhr, Inc., Henry

VISCOSIMETERS, Ultrasonic

Bendix, Cinicinnati Div.
Gulton Mfg. Corp.
Hall Sonic Engrg. Co.

VISCOSIMETERS, Zahn

Central Scientific
Electro-Tech Equip.
Fisher Scientific
GE, Apparatus Sales
Gardner Lab.
Kontes Glass
Precision Scientific
Sargent & Co., E. H.

VISCOSITY CONTROLLERS

Askania Reg. Co.
Askania-Werke, A. G.
Autom. Temp. Control
Bailey Meter Co.
Bendix, Cincinnati Div.
Berkeley Div.
Brabender Corp.
Bristol Co.
Brookfield Engrg. Labs.
Drage Products
Fischer & Porter Co.
Foxboro Co.
General Controls
GE
Hall-Sonic Engrg. Co.
Hallikainen Inst.
Norcross Corp.
Perfex Corp.
R. K. L. Valve & Mfg. Co.
Scientific Instr.
Taylor Instr. Cos.
Visco-Meter Corp.

VISCOSITY GAGES, see Viscosimeters

VISCOSITY TUBES

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Bellco Glass Co.
Berkeley Div.
Cannon Instr. Co.
Cargille, R. P.
Coleman Insts., Inc.
Eltzen Co., Louis Co.
Fisher Scientific
Fish-Schurman Corp.
Gardner Laboratory
Humboldt Mfg. Co.
Koehler Instr. Co.
Kontes Glass
Labline, Inc.
Owens-Illinois Glass
Phoenix Prec. Instr. Co
Precision Scientific
Pyramid Instrument
Scientific Glass App.

VOLTAGE COMPARATORS

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Arma Corp.
Boonton Radio Corp.
Cal-Tronics Corp.
Consolidated Avionics
Daystrom Instr. Co.
DoAll Co.
Donner Scientific
Electro-Pulse, Inc.
Electro Insts., Inc.
Feller Engrg. Co.
Griswold Mfg. Co.
Hamner Electronics
Helipot Div.
Hycon Electronics
Kepco Labs.
Non-Linear Systems
Phaostron Co.
Rainhart Co.
Rheem Mfg. Co.
Rubicon Co.
Scott, Inc., Hermon H.
Sensitive Res. Instr.
Shallcross Mfg. Co.
Sheffield Corp.
Simpson Electric
Thordarson-Meissner
Wang Labs, Inc.
Wiancko Engrg. Co.

VOLTAGE DETECTORS, see Null Detectors

VOLTAGE DIVIDERS, see Attenuators, also Potentiometers (Resistors)

VOLTAGE, HIGH (above 2300 volts), MEASURING DEVICES and/or INDICATORS

Acton Labs.
Advance Electronics
Associated Research
Atomic Instr. Co.
Ballantine Labs.
Barber Labs., Alfred
Beta Electric
Boone Instr.
Bradshaw Instruments
Cal-Tronics Corp.
Chicago Indus. Instr.
Dale Instruments
Davenport Mfg. Co.
Del Electronics Co.
Dittmore & Freimuth
Electronic Instr. Co
Federal Telephone
Feiler Engrg. Co.
Ferranti Electric
Freed Transformer
Fox Valley Inst.
GE, Apparatus Sales
General Physical Lab.
Hewlett-Packard Co.
Hickok Elect. Instr. Co.
International Resistance
Jennings Radio Mfg. Co.
Keithley Insts., Inc.
Leeds & Northrup
Manson Labs.
Meters, Inc.
Opad Electric
Peschel Electronics, Inc.
Phaostron Co.
Philco Corp.
Precise Development
Precise Measurements Co
Precision Apparatus
Radio City Prod. Co.
RCA Div.
Rawson Electcl. Instr
Reiner Electronics
Roller-Smith
Rubicon Co.
Scient. Inst. Dev. Lab.
Sensitive Res. Instr
Shallcross Mfg.
Sherron Metallic
Simpson Electric
Spellman Television
Sun Electric Corp.
Sylvania Elec. Prod.
Triplett Electcl. Instr.
Vectron, Inc.
Wallson Associates
Westinghouse Electric

VOLTAGE, HIGH (above 2300 volts), TESTING DEVICES

Advanced Electronics Inc.
American Transformer
Asch Equipment Co.
Associated Research
Beta Electric
Bradshaw Instruments
Cal-Tronics Corp.
Chicago Indus. Instr.
Davenport Mfg. Co.
Del Electronics
Detectolab, Inc.
Dittmore & Freimuth
Electronic Instr. Co.
El Mec Laboratories
Feiler Engrg. Co.
GE, Apparatus Sales
Hewson Co.
Industrial Insts., Inc.
Industrial Test Equipt.
International Resistance
Keithley Instruments
MacLeod & Hanopol
Magnatran Inc.
Manson Labs.
Multi-Amp Corp.
Opad Electric
Peschel Electronics, Inc.
Phaostron Co.
Precise Measurements Co.
Precision Apparatus
Radio City Prod. Co
Radio Frequency Labs.
Raytheon Mfg. Co.
Reiner Electronics
Roller-Smith
Rubicon Co.
Scient. Inst. Dev. Lab.
Sensitive Res. Instr.
Shallcross Mfg. Co.
Sherron Metallic
Simpson Electric
Slaughter Co.
Spellman Television
States Co.
Superior Electric
Thordarson-Meissner
Triplett Elect. Instr.
Westinghouse Electric
Weston Electcl. Instr.

VOLTAGE REGULATORS, Glow Tube

Anton Electronic Labs.
Chatham Electronics Div.
GE, Tube Dept.
Kepco Labs.
Mercury Electronic Co.
Nuclear Devel. Lab.
Radio Corp. of Amer.
Raytheon Tube Div.
Rheem Mfg. Co.
Servo-Tek Prods. Co.
Transval Engrg. Corp.
Victoreen Instr. Co.
Western Gear Corp.

VOLTAGE REGULATORS, Line Voltage (see also Transformers, Constant Voltage)

ACF Electronics
Acme Electric Corp.
Allis-Chalmers
Ameri. Machine & Fdry.
Amer. Transformer
Amperite Corp.
Amplifier Co.
Anton Electronic Labs.
Askania Reg. Co.
Assembly Products
Authorized Mfrs. Service
Automatic Electric
Barber-Colman
Beck Co.
Bendix, Eclipse Pioneer
Bendix, Red Bank
Beva Laboratory
Bogue Elect. Mfg. Co.

Boonton Radio Corp.
Bradley Labs.
Burlington Instr. Corp.
Burroughs Corp.
Cal-Tronics Corp.
Chicago Std. Transf. Corp.
Clark Controller
Clarostat Mfg. Co.
Clippard Instr. Lab.
Collins Radio
Commercial Research
Communication Meas. Lab.
Control Corp.
Curtiss-Wright Corp.
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Devtronics, Inc.
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Electric Regulator Corp.
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Electronic Measmt. Co.
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Electronic Specialty Co.
Electrosig Corp.
Electro-Tech Equip.
El Mec Laboratories
El-Tronics, Inc.
Federal Telephone
Ferris Instr. Corp.
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Fredericks, George
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General Radio
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Hastings-Raydist
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Jersey City Tech. Lab
Jo-Line Tools
Kay-Lab
Kellogg Switchboard
Kemlite Labs.
Kepco Labs.
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La Marche Mfg.
Lambda Electronics
Lewis & Co., J. B.
Magnetic Amplifiers, Inc.
Magnetic Instr. Co.
Magnetic Research Corp.
Martin & Co.
Maxson Corp., W. L.
Mercury Electronic Co.
Metrotype Corp.
Minneapolis-Honeywell,
  Boston Div.
NJE Corp.
Newark Electric Co.
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Oregon Electronic
Peschel Electronics
Perkin Engrg. Co.
Polarad Electronics
Precise Measmts. Co.
Process & Instruments
Radiation Instr. Dev. Lab.
RCA Div.
Radio City Products
Raytheon Mfg. Co.
Reeves Instr. Corp.
Research Specialties
Richardson-Allen
Rockwell Engr.
Rudolph & Sons, O. C.
Shallcross Mfg. Co.
Sherron Metallic
Sola Electric
Sorensen & Co.
Standard Elect. Time Co.
Streeter-Amet Co.
Superior Electric
Sylvania Elect. Prods.
TAB
Teletronics Lab.
Tel-Instr. Electrs. Corp.
Thermador Electcl. Mfg. Co.
Thordarson-Meissner
Timely Insts. & Conts. Co.
Transmag Div.
Transval Engrg. Corp.
United Electric
United Transformer Corp.
Varian Assocs.
Varo Mfg. Co.
Vickers Elec. Div.
Victoreen Inst. Co.
WacLine, Inc.
Wallson Associates
Walkirt Co.
Ward Leonard
Westinghouse Electric
Wilson & Co., G. C.
Yellow Spring Instr. Co.

VOLTAGE STANDARDS, see Standard Cells

VOLTAGE SUPPLIES, see Power Supplies

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Amer. Mach. & Foundry
Assembly Products
Associated Research, Inc.
Beckman Instruments
Beede Electcl. Instr. Co.
Bradshaw Instruments
Bristol Co.
Burlington Instr. Co.
Burton-Rogers
Chicago Indust. Instr. Co.
Clough-Brengle Co.
Columbia Electric Mfg.
Computer Co. of Amer.
Dale Instruments
Davenport Mfg. Co.
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Dittmore Freimuth Corp.
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Electro-Tech Equipt. Co.
Electronic Dev. Lab.
Electronic Instr. Co.
Engelhard, Inc., Charles
Epic, Inc.
Esterline-Angus Co.
Feiler Engrg. Co.
Fox Valley Inst.
GE, Apparatus Sales
Greibach Instruments
Gulton Industries
Hickok Electcl. Instr. Co.
International Instrument
Instrument Labs
Kin Tel
Lewis Engrg. Co.
Marion Elec. Inst.
Martindale Elect. Co.
Measurements Corp.
Meters, Inc.
Mil Instr. Corp.
Miller, M. C.
Newark Electric Co.
Phaostron Co.
Physics Research
Precision Apparatus Co.
Pyramid Instr. Corp.
Q.V.S., Inc.
Radio City Products
RCA Div.
Rawson Electcl. Instr.
Reiner Electronics
Rochester Mfg. Co.
Roller-Smith Co.
Sangamo Electric
Schauer Mfg. Corp.
Sendur Mfg. Co.
Sensitive Res. Instr.
Shurite Meters
Simpson Electric
Sticht Co.
Sun Electric
Supreme Instruments
Triplett Elect. Instr. Co.
United Electric
United Optical Mfg.
U. S. Gauge Div.
Waters Mfg.
Welch Mfg. Co., W. M.
Westberg Mfg. Co.
Westinghouse Electric
Weston Electcl. Instr.
Wheelco Instr. Co.

VOLT-AMPERE-HOUR METERS

Ferranti Electric
GE Apparatus Sales
Minneapolis-Honeywell
Roller-Smith
Sangamo Electric
Simpson Electric
Waters Mfg.
Westinghouse Electric

VOLT-AMPERE METERS Reactive

Amer. Mach. & Foundry
Bristol Co.
Dittmore & Freimuth
Electrical Facilities, Inc.
Esterline-Angus Co.
GE, Apparatus Sales
Hickok Electr. Instr.
Landis & Gyr, Inc.
Roller-Smith
Sangamo Electric
Sensitive Research Inst.
Simpson Electric
Triplett Electr. Instr.
Waters Mfg.
Welch Mfg. Co., W. M.
Westinghouse Electric
Weston Electcl. Instr.

VOLTMETERS, AC, Rectifier

Amer. Mach. & Foundry
Assembly Prod., Inc.
Associated Research
Ballantine Labs.
Beede Electcl. Instr. Co.
Boonton Radio Corp.
Bradshaw Instruments
Bristol Co.
Burlington Instr. Co.
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Chicago Indust. Instr. Co.
Dale Instr. Co.
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De Jur-Amsco Corp.
Dittmore & Freimuth
Elec. Design & Mfg.
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Electr-Tech Equip.
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Electro Insts.
Electronic Instr. Co.
Endevco Corp.
Esterline-Angus
Feiler Engrg. Co.
Fisher Res. Lab.
Gar Electcl. Instr.
GE Apparatus Sales
General Radio Co.
Helipot Div.
Hewlett-Packard
Hickok Electcl. Instr.
International Instruments
Mag Electric
Marion Elec. Instr. Co.
Meters, Inc.
Mil Instr. Corp.
Norton Elect. Instr. Co.
Pace Electrical Inst.
Phaostron Co.
Physics Research
Precision Apparatus Co.
Q.V.S., Inc.
RCA Div.
Radio City Products
Roller-Smith
Sendur Mfg. Co.
Sensitive Res. Instr.
Shallcross Mfg.
Simpson Electric
Sterling Mfg. Co.
Sun Electric
Supreme, Inc.
Sylvania Elect. Prods.
Texas Insts., Inc.
Tipp-Tronic, Inc.
Triplett Elect. Instr. Co.
United Optical Mfg.
U. S. Gauge Div.
WacLine, Inc.
Waters Mfg.
Welch Mfg. Co., W. M.
Westinghouse Electric
Weston Electcl. Instr.

VOLTMETERS, Contact Making, see D'Arsonval-type Controllers

VOLTMETERS, Digital

Berkeley Div.
Chatham Electronics Div.
Coleman Engrg. Co.
Computer Corp. of Amer.
Consolidated Avionics
Datran Electronics
Electro Insts.
Electronic Assocs.
Franklin Electronics
Furst Electronics
Hanson-Gorrill-Brian
Hycon Electronics
Julie Res. Labs.
Lab. for Electronics
Leeds & Northrup
Link Aviation
Moseley Co.
Non-Linear Systems
Phaostron Co.
Reeves Instr. Corp.
Simpson Electric Co.
Systron Corp.
Telecomputing Corp.
Wang Labs., Inc.
Weston Electcl. Instr.

VOLTMETERS, Electrostatic

Assembly Products
Cambridge Instr. Co.
Custom Scient. Insts.
Dittmore & Freimuth
Electro-Tech Equip.
Epic, Inc.
Ferranti Electric
GE
General Electronic
Hathaway Instr. Co.
Hickok Elect. Instr. Co.
Hycon Electronics
Industrial Control
Keithley Instruments
Landsverk Electrometer
Rawson Electcl. Instr.
Scientific Specialties
Sensitive Res. Instr.
Simpson Electric
Sticht Co., Herman H.
United Optical Mfg.
WacLine, Inc.
Weston Electcl. Instr.

VOLTMETERS, Indicating

Assembly Prod., Inc.
Associated Research
Ballantine Labs.
Barber Colman
Beede Electcl. Instr. Co.
Berkeley Div.
Boone Instr.
Bristol Co.
Brush Electronics
Burlington Instr. Co.
Burton-Rogers
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Kay Electric
Keithley Instruments
Lewis Engrg. Co.
Link Aviation
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Marion Elec. Instr. Co.
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Wheelco Div.
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VOLTMETERS, Laboratory Standard

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Ferranti Electric
Fluke Mfg. Co., John
Furst Electronics, Inc.
GE, Apparatus Sales
Greibach Instruments
Gulton Industries
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Industrial Control Co.
Marion Electcl. Instr. Co.
Measurements Corp.
Minneapolis-Honeywell,
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Oltronix Co.
Phaostron Co.
Physics Research
RCA
Radio Frequency Labs.
Rawson Electcl. Instr.
Roller-Smith
Sensitive Res. Instr.
Simpson Electric
Southw. Indust. Electronic
Triplett Electcl. Instr.
United Optical Mfg.
U. S. Gauge Div.
Welch Mfg. Co., W. M.
Westinghouse Elect. Corp.
Weston Electcl. Instr.

VOLTMETERS, Micro, RF

Ballantine Labs.
Beede Electcl. Instr.
Blonder-Tongue Labs.
Boonton Radio Corp.
Burlington Instr. Co.
Clarke Instr. Corp.
Computer Co. of Amer.
Elect. Des. & Mfg. Co.
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Federal Telephone
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Hewlett-Packard
Hickok Electcl. Instr. Co.
Kay Electric
Leeds & Northrup
Millivac Instruments
Phaostron Co.
Shasta Div.
Sierra Electronic Corp.
Simpson Electric
Stoddart Aircraft Radio
Sylvania Elect. Prods.
Triplett Elect. Inst.
WacLine, Inc.
Welch Mfg. Co., W. M.
Weinschel Engrg. Co.
Westinghouse Electric

VOLTMETERS, Millivolts and Microvolts

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Asch Equipment Co.
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Ballantine Labs.
Barber-Colman
Beckman Instruments
Beckman & Whitley
Beede Electcl. Instr. Co.
Biddle Co., James G.
Boonton Electronics
Boonton Radio Corp.
Bristol Co.
Brunswick Instruments
Brush Electronics
Burlington Instr. Co.
Burton-Rogers Co.
Cambridge Instr. Co.
Chicago Ind. Instr.
Columbus Products
Commercial Research
Communication Meas. Lab.
Computer Co. of Amer.
Dale Instruments
Daven Co.
DeJur-Amsco Corp.
Dittmore & Freimuth
DuMont Lab., Allen B.

GOERZ Precision MOVING COIL LABORATORY INSTRUMENTS FOR AC and DC

MODEL 124223

GOERZ Moving coil, moving iron and electrodynamometer precision instruments offer these features;

- Accuracies of ±0.5%
- Frequencies to 10,000 cps.
- Moderate cost
- Universal terminals
- Multiranges
- Single and three phase wattmeters

IN STOCK

The GOERZ moving coil, moving iron and electrodynamometer precision instruments include: AC and DC Voltmeters, Ammeters and Milliameters, DC Microammeters, DC high sensitivity millivoltmeters, needle galvanometers, single and three-phase, three-wire and three-phase four-wire wattmeters and power factor meters.

For Complete Line of GOERZ fine instruments Request Catalog IA56
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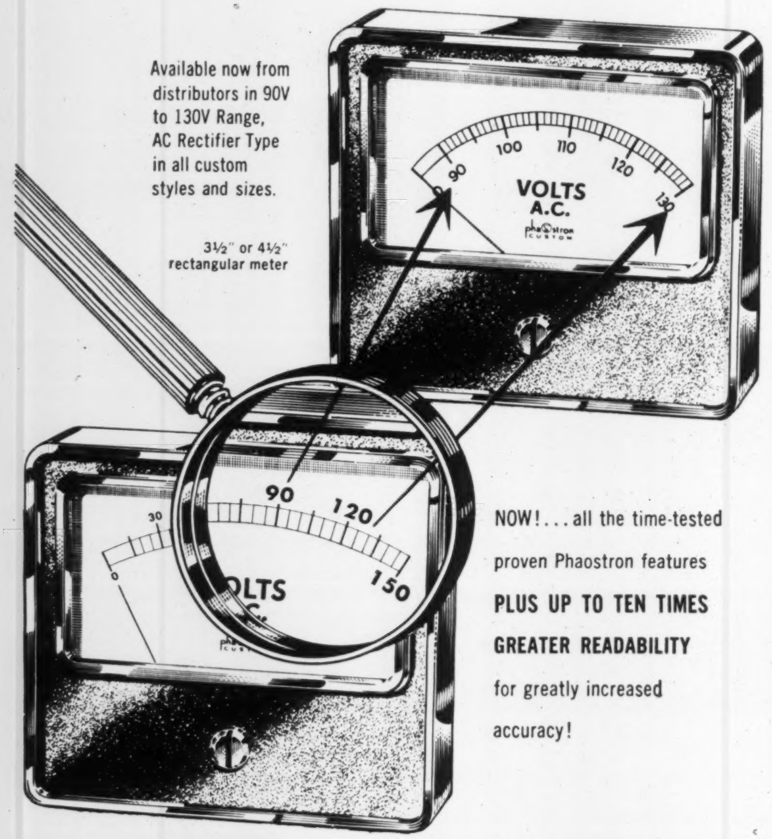
EMA ZURICH

Physics Research LABORATORIES
House of Fine Instruments
CONSULTANTS IMPORTERS

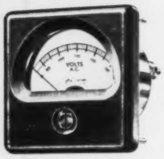
NEW PHAOSTRON
EXPANDED SCALE
AC Voltmeter

Available now from distributors in 90V to 130V Range, AC Rectifier Type in all custom styles and sizes.

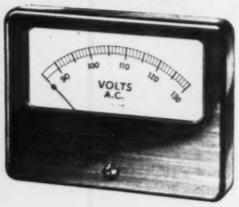
3½" or 4½" rectangular meter



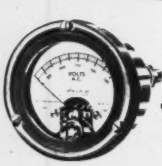
NOW!... all the time-tested proven Phaostron features **PLUS UP TO TEN TIMES GREATER READABILITY** for greatly increased accuracy!



2½" or 3½" square meter



6" rectangular meter



2½" or 3½" round meter

All meters available with illuminated dial on special order.

Phaostron has squeezed down that under 90V portion of the scale, where you don't need it, and expanded the section where you need it most—between 90 and 130V. Precisely calibrated 1 volt scale increments provide greater reading accuracy. Wide frequency range—linearity—true rms reading and Phaostron craftsman construction.

Phaostron Custom Panel Meters, with expanded scale, 90V to 130V AC rms, are available in nine types at your Parts Distributor. For special requirements for AC or DC expanded scale meters, write to Product Development Dept. for practical recommendations.

PHAOSTRON

PHAOSTRON INSTRUMENT & ELECTRONIC CO., 151 PASADENA AVE., SOUTH PASADENA, CALIF.

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Electronic Devel. Co.
Engelhard, Chas.
Epic, Inc.
Esterline-Angus
Federal Telephone & Radio
Feiler Engrg. Co.
Fielden Instr. Div.
Fisher Research Lab.
Foxboro Co.
Franklin Electronics
Freed Transformer
Gar Electcl. Instr.
GE, Apparatus Sales
General Radio
Greibach Instruments
Gulton Industries
Heath Co.
Hickok Electcl. Inst. Co.
Hycon Electronics
Industrial Control Co.
Internat. Instruments
J-B-T Insts.
Jarco Services
Kay Electric
Keithley Insts.
Kin Tel
Lewis Engrg. Co.
Liston-Becker
Mag Electric
Manning, Maxwell & Moore
Marconi Instruments
Marion Electcl. Instr.
Measurements Corp.
Meters, Inc.
Microvolts, Inc.
Mil Instr. Corp.
Miller, M. C.
Millivac Instruments
Minneapolis-Honeywell
  Boston Div.
Moseley Co., F. L.
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Norton Electcl. Instr.
Pace Electcl. Instr.
Phaostron Co.
Physics Research
Pimex, Inc.
Precision Apparatus Co.
Pyrometer Instr. Co.
Q.V.S., Inc.
RCA
Radio City Products
Rawson Electcl. Instr.
Reiner Electronics
Roller-Smith
Scientific Specialties
Sensitive Res. Instr.
Shallcross Mfg. Co.
Sierra Electronic
Simpson Electric
Southw. Indust. Electronic
Standard Science Sup.
Sun Electric
Sun Mfg. Co.
Supreme, Inc.
Teletronics Labs., Inc.
Televiso Co.
Texas Insts., Inc.
Thwing-Albert
Trio Labs., Inc.
Triplett Electcl. Instr.
United Electric
United Optical Mfg.
WacLine, Inc.
Waters Mfg.
Welch Mfg. Co., W. M.
West Instr.
Westinghouse Electric
Weston Electcl. Instr.
Wheelco Div.

VOLTMETERS, Millivoltmeters, AC, Rectifier

Assembly Products
Ballantine Labs.
Beckman Instruments
Beede Electcl. Instr.
Boonton Radio Corp.
Bristol Co.
Burlington Instruments
Burton-Rogers
Chicago Indust. Instr.
Dale Instruments
DeJur-Amsco
Dittmore & Freimuth
DuMont Lab., Allen B.
Elect. Design & Mfg.
Electro Insts., Inc.
Electronic Development
Electronic Instr. Co.
Electro-Tech Equip.
Fed. Telephone & Radio
Feiler Engrg. Co.
Fisher Res. Lab.
GE, Apparatus Sales
Gar Electcl. Instr. Co.
Hewlett-Packard
Hickok Elec. Instr.
Internat. Instruments
Mag Electric
Marion Electcl. Instr.
Mil Instr. Corp.
Pace Electcl. Instr.
Phaostron Co.
Physics Research
Precision Apparatus Co.
Q.V.S., Inc.
Radio City Products
Roller-Smith
Sensitive Res. Instr.
Simpson Electric
Southw. Indust. Electronic
Special Instruments Lab.
Sun Electric
Supreme, Inc.
Texas Insts., Inc.
Tipp-Tronic, Inc.
Triplett Electcl. Instr. Co.
United Optical Mfg.
WacLine, Inc.
Waters Mfg.
Welch Mfg. Co., W. M.
Westinghouse Electric
Weston Electcl. Instr.

VOLTMETERS, Oxide Rectifier

Beede Electcl. Instr.
Burlington Instr. Co.
Chicago Indust. Instr.
Clough-Brengle
Dale Instruments
DeJur-Amsco Corp.
Elect. Design & Mfg.
Electronic Dev. Lab.
Electro-Tech Equip.
Esterline-Angus
Feiler Engrg. Co.
GE, Apparatus Sales
General Radio
Hickok Electcl. Instr.
Marion Electcl. Instr.
Meters, Inc.
Pace Electcl. Instr.
Phaostron Co.
Physics Research
Precision Apparatus Co.
Reiner Electronics
Roller-Smith
Simpson Electric
Sun Mfg. Co.
Supreme Inc.
Texas Instrs., Inc.
Tipp-Tronic, Inc.
Triplett Electcl. Instr.
Triumph Mfg. Co.
United Electric
WacLine, Inc.
Westinghouse Electric

VOLTMETERS, Peak

Ballantine Labs.
Barber Labs., Alfred
Beta Electric
Burton-Rogers
Clark Instr. Corp.
Clough-Brengle
Control Devices
Davenport Mfg. Co.
Electronic Dev. Lab.
Electronic Measurements
Ellis Associates
Endevco Corp.
Federal Telephone
Feiler Engrg. Co.
Fox Valley Instr. Co.
Franklin Electronics
GE, Apparatus Sales
General Radio
Gertsch Products
Hewlett-Packard
Hickok Electcl. Instr.
Industrial Devices Inc.
Jennings Radio Mfg. Co.
Kay Electric
Measurements Corp.
Non-Linear Systems
Physics Research
Radio City Products
RCA
Rawson Electcl. Instr.
Rowe Engrg. Co.
Sensitive Res. Instr.
Shepard Labs.
Simpson Electric
Supreme, Inc.
Triplett Electcl. Instr.
WacLine, Inc.

VOLTMETERS, Recording

Alfax Paper & Engrg.
Amer. Mach. & Foundry
Audio Instr. Co.
Barber-Colman
Berkeley Div.
Bristol Co.
Brush Electronic
Cambridge Instr. Co.
Consolidated Avionics
Electrical Dev. Co.
Electro Insts., Inc.
Electro-Tech Equip.
Endevco Corp.
Engelhard, Chas.
Engrg. Enterprises
Esterline-Angus
Franklin Electronics
Fielden Instr. Div.
GE, Apparatus Sales
Hycon Electronics
Larson Instr. Div.
Leeds & Northrup
Manning, Maxwell & Moore
Massa Labs.
Millivac Instr. Co.
Non-Linear Systems
Oltronix Co.
Physics Research
Precise Measurements Co.
Roller-Smith
Sanborn Co.
Sangamo Electric
Techn. Prods. Co.
Texas Insts., Inc.
Westinghouse Electric
Weston Elect. Inst.

VOLTMETERS, Thermionic Rectifier

Ballantine Labs
Barber Labs., Alfred
Beede Elect. Instr.
Cambridge Instr. Co.
Chicago Indust. Instr.
Clippard Instr. Lab.
Electronic Dev. Lab.
Fluke Mfg. Co., John
GE, Apparatus Sales
General Radio Co.
Hickok Elec. Instr.
Measurements Corp.
Meters, Inc.
Physics Research
Simpson Electric
Sylvania Elect. Prods.
Triplett Elect. Instr.

VOLTMETERS, Thermo

Amer. Elect. Sales Co.
Assembly Products
Beede Elect. Instr. Co.
Cambridge Instr. Co.

BALLANTINE VOLTMETERS

Famous for SENSITIVITY • ACCURACY • STABILITY

AUDIO to 150 kc — MODEL 300

Voltage Range	1mv—100v
Frequency Range	10cps—150kc
Accuracy	2% ENTIRE RANGE
Input Impedance	½ meg shunted by 30µµf

SUB-AUDIO to 150 kc — MODEL 302C

Battery Operated

Voltage Range	100 µv—1000v
Frequency Range	2cps—150kc
Accuracy	3% 5cps—100kc 5% elsewhere
Input Impedance	2 meg shunted by 25 µµf*

*Shunt capacitance, 10µµf on all ranges except two most sensitive ranges

PEAK-to-PEAK — MODEL 305

Voltage Range	1mv—1000v pk-to-pk
Frequency Range	10cps—100kc (sine wave)
Pulse width	3µsec—250µsec
Min Rep Rate	20 pulses per sec
Accuracy	5% for pulses
Input Impedance	2 meg shunted by 15 µµf*

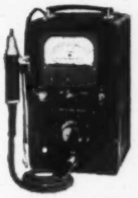
*Shunt capacitance, 8 µµf on all ranges except two most sensitive ranges

AUDIO to 2 mc — MODEL 310A

Voltage Range	100 µv—100 v *Down to 40 µv at reduced accuracy*
Frequency Range	10 cps—2 mc *As null detector 5 cps.—4 mc*
Accuracy	3% 10 cps—1 mc 5% elsewhere
Input Impedance	2 meg shunted by 15 µµf*

*Shunt capacitance, 8 µµf on all ranges except two most sensitive ranges

AUDIO to 6 mc — MODEL 314



Voltage Range	1mv—1000v (100µv—1mv without probe)
Frequency Range	15cps—6mc
Accuracy	3% 15cps—3mc 5% elsewhere
Input Impedance	11 meg shunted by 7.5 µµf (1 meg shunted by 25 µµf without probe)

INFRASONIC to 30 kc — MODEL 316

Voltage Range	20 mv—200 v pk-to-pk
Frequency Range	0.05 cps—30 kc *(Down to .01 cps with corrections)*
Accuracy	3% ENTIRE RANGE
Input Impedance	10 meg shunted by 19 µµf *or 40 µµf depending on setting*

ACCESSORIES are available for all voltmeters to extend voltage measurements down to 20 µv and up to 10 kv, and to measure currents from 0.1 µamp to 10 amp, and to provide DC from the Model 300 Voltmeter to drive external recorders or remotely located meters.

TRUE RMS INDICATION — MODEL 320

Voltage Range	100 µv—320 v
Frequency Range	5 cps—500 kc
Accuracy	3% 15 cps—150 kc 5% elsewhere
Stability of Internal Calibrator	0.5%
Input Impedance	10 megs shunted by 25 µµf below 10 mv 10 megs shunted by 8 µµf above 10 mv

DC & AC PRECISION CALIBRATOR MODEL 420

Voltage Range	0-10 v RMS; Pk-to-Pk; or DC
Frequency (Std. Model)	1 kc *(other values on special order)*
Accuracy (long term)	Better than 0.5% above 1 mv
Distortion and Hum	Less than 0.5%
Setting Resolution	Approaches 0.01% above 10 mv
Output Impedance (AC)	2-20 ohms depending on range setting

SENSITIVE INVERTER — MODEL 700

For Measuring DC Voltages when combined with any AC Voltmeter

Voltage Range	1µv—100v DC
Ratios DC Input to RMS Output	1:100 & 10:1
Accuracy	1% 100µv—100v
Input Resistance	>10 meg for 1:100 50 meg for 10:1

DECADE AMPLIFIER — MODEL 220B

For Increasing the Sensitivity of any AC Voltmeter by 10 or 100 times

Voltage Range	10µv—50mv
Frequency Range	10cps—150kc
Accuracy	2% ENTIRE RANGE
Input Impedance	5 meg shunted by 15µµf

DIRECT READING CAPACITANCE METER MODEL 520

Capacitance Range	0.01 µµf to 12 µf *in 9 decade ranges covering over a billion to 1*
Accuracy	2% above 0.1 µµf 5% below 0.1 µµf
Capacitor Power Factor	0.15
Test Frequency	1 kc

Each Ballantine Voltmeter has only one voltage scale, with decade range switching, which provides the same accuracy of reading at all points on the logarithmic voltage scale. A linear decibel scale is also provided for use by acoustical engineers. Each Voltmeter also may be used as a high gain wide band amplifier.

WRITE FOR MORE DETAILED INFORMATION TO—

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Pimex, Inc.
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Sangamo Electric
Sensitive Res. Instr.
Sun Manufacturing
Triplett Electcl. Instr.
WacLine, Inc.
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Westinghouse Electric
Weston Electcl Instr.
Wheelco Instr. Div.

VOLTMETERS, Vacuum Tube, see Vacuum Tube Voltmeters

VOLT-OHMMETERS

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Beta Electric
Bradshaw Instruments
Bruno-N. Y. Indus.
Burlington Instr. Co.
Chicago Indust. Instr.
Clippard Instr. Lab.
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Co-Design Corp.
Dale Instruments
Daven Co.
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Delmhorst Instr. Co.
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Electro Instruments
Electro-Mech. Instr.
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Electronic Engrg. Serv.
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Electronic Measurements
Esterline-Angus
Feller Engrg. Co.
Franklin Electronics
Freed Transformer
GE
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Jackson Electcl. Instr.
Keithley Instruments
Marconi Instruments
Martindale Electric
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Physics Research
Pimex, Inc.
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Precision Apparatus Co.
Q.V.S., Inc.
Radio City Products
RCA, Tube Div.
Rawson Electcl. Instr.
Reiner Electronics Co.
Roller-Smith
Sensitive Res. Co.
Shallcross Mfg. Co.
Sherron Metallic
Shurite Meters
Simpson Electric
Southw. Indust. Elect.
Sticht Co., Herman H.
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Sun Mfg. Co.
Superior Instruments
Supreme, Inc.
Teletronics Labs., Inc.
Triplett Electcl. Instr.
Triumph Mfg. Co.
United Optical Mfg.
Universal Instr. Co.
Waters Mfg.
Welch Mfg. Co., W. M.
Western Radiation Labs.
Westinghouse Electric
Weston Electcl. Instr.

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Air-O-Tronics
Allied Radio Corp.
Beede Electcl. Instr.
Bradshaw Instruments
Bristol Co.
Bruno-N. Y. Indus.
Carol Electronics
Chicago Indust. Instr.
Cole Instr. Co.
Columbus Products
Computer Co. of Amer.
Dale Instruments
Douglas Radio Labs.
Electro-Mech. Instr.
Electronic Development
Electronic Engrg. Co.
Electronic Instr. Co
Electronic Measmts. Corp.
Electro-Tech Equip.
Federal Telephone
Feller Engrg. Co.
Greibach Instruments
Gulton Industries
Hewlett-Packard
Hickok Electcl. Instr.
Instrument Laboratories
Jackson Elect. Instr.
Mag Electric
Marion Electcl. Instr.
Martindale Electric
Meters, Inc.
Mil Instr. Corp.
Millivac Instruments
Newark Electric Co.
Non-Linear Systems
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Precision Apparatus Co.
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Pyramid Instrument
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Radio City Products
RCA, Tube Div.
Reiner Electronics Co.
Roller-Smith
Simpson Electric
Sticht Co., Herman
Supreme, Inc.
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Teletronics Labs., Inc.
Triplett Electcl. Instr.
United Optical Mfg.
Waters Mfg.
Westinghouse Electric
Weston Electcl. Instr.
Yonkers Industries

VOLUME CONTROLS, see Potentiometers (Resistors)

VOLUME INDICATORS, Sound, see Sound

VOLUME STANDARDS, see Standards, Volume

VSWR INDICATORS

Allied Radio Corp.
BJ Electronics
Calif. Tech. Indus.
Cubic Corp.
F-R Machine
General Radio Co.
Hewlett-Packard
Industrial Control Co.
Johnson Co., E. F.
Marconi Instruments
Narda Corp.
Polarad Electronics
Polytechnic Res. & Dev. Co.
Sierra Electronic Corp.
Sylvania Elec. Prods.
Westinghouse Electric.

WASHERS, Amber.

Felt Products Mfg.
Polymer Corp. of Pa.
Waltham Screw Co.

WASHERS, Lead

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Auburn Mfg. Co.
Autoscrew Co.
Bar-Ray Products
Belmont Smg. & Refg.
Division Lead Co.
Federal Screw Prod. Co.
Federated Metals
Felt Products
Heitz, Inc., Karl
Hi-Grade Alloy Corp.
Koehler Instr. Co.
Stafford Co.
Star Stainless Screw Co.
Staver Co., Inc.
Stimpson Co., Edwin B.
Stronghold Screw Prods.
United Screw & Bolt
Whitehead Stamping

WASHERS, Precious Metal

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Amer. Platinum Wks.
Amer. Silver Co.
Auburn Mfg. Co.
Autoscrew Co.
Baker & Co., Inc.
Bishop Platinum Wks.
Federal Screw Prods. Co.
General Plate Div.
Gibson Electric
Handy & Harman
Heitz, Karl, Inc.
Keystone Carbon Co.
Modern Tech. Supply
Ney Co.
Research Devel. Mfg.
Secon Metal Corp.
Staver Co., Inc.
Stimpson Co.
Swissomatic Products
Waltham Screw Co.
Whitehead Stamping
Wilson Co., H. A.

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Fischer & Porter Co.
Foxboro Co.
Hays Corp.
Leeds & Northrup
Leupold & Stevens
Mason-Neilan Div.
Minneapolis-Honeywell
  Indust. Div.
Penn. Insts. Div.
Precision Scientific
R. K.L. Valve Mfg. Co.
Simplex Valve & Meter
Wallace & Tiernan

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American Time Prods.
Borel & Co.
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Paulson & Co.
Potter Instr. Co.
Wakmann Watch Co.

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Allied Prods. Div.
Bliss & Co.
Borel & Co.
Clebar Watch Co.
Ducommun Co., M.
Elgin National Watch
Jaeger Watch Co.
Jardur Import Co.
Lafayette Instr. Co.
Negus, T. S. & J. D.
Sticht Co.
Technical Instruments
Wakmann Watch Co.

WATCHES, Stop

Allied Prods. Div.
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Central Scientific
Clebar Watch Co.
Dietzgen Co., Eugene
Ducommun Co., M.
Eitzen Co., Louis C.
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Electro-Tech Equip.
Elgin National Watch
Fish-Schurman
Fisher Scientific
Gaertner Scientific
Gallien, R. P.
General Scientific Equipt.
Gordon Enterprises
Greiner, Emil
Jaeger Watch Co.
Jardur Import Co.
Lafayette Instr. Co.
Martindale Elect. Co.
Negus, T. S. & J. D.
Precision Scientific
Racine & Co., Jules
Scherr Co., Inc.
Speidel & Co.
Standard Elec. Time
Sticht Co., Herman H.
Stoelting Co., C. H.
Wakmann Watch Co.
Weston Electcl. Instr.
White Co.
Zernickow Co.

WATCHES, Stop-Electric

Central Scientific Co.
Chrono-Log
Clebar Watch Co.
Cramer Controls Co.
Dimco-Gray
Elgin Natl. Watch Co
Greiner, Emil
Jaeger Watch Co.
Jardur Import
Lafayette Instr. Co.
Precision Scientific Co.
Standard Elect. Time
Sticht Co.
Stoelting Co., C. H.
Thompson Clock Co.
Wakmann Watch Co.
Weston Electcl. Instr.

WATCHMAKER'S SUPPLIES

Amer. Laubscher
Bausch & Lomb
Bayside Watch Tool
Borel & Co., Jules
Gallien, R. P.
Hairspring Vibrating
Jadow, Inc.
Kastner, Charles
L & R Mfg. Co.
Levin & Son, Louis
Marshall Co., C. & E.
Modern Tech. Supply
Newall Mfg. Co.
New Jersey Jewelers' Sup.
Nye, Inc., William F.
Sickles & Sons, Inc., M.
Swissomatic Products
Wakmann Watch Co.
Waples, Wm. S.
Zenith Mfg. & Chem. Corp.

WATCHMAKER'S TOOLS (see also Jewelers' Lathes)

Bayside Watch Tool
Borel & Co., Jules
Derbyshire, Inc., F. W.
Dixon, Inc., William
Fineisen, A. R.
Gallien, R. P.
Gilman Engrg. & Mfg.
Grobet File Co. of Amer.
Gustafson Mfg. Co.
Hirschmann Co., Carl
Ideal-Aerosmith
J & S Tool Co.
Jadow, Inc.
Jensen Mfg. Co.
Kastner, Charles
Kendrick & Davis Co.
L & R Mfg. Co.
Levin & Sons, Louis
Lorber Export, Import
Marshall Co., C. & E.
Modern Tech. Supply
Morris Co., J. L.
Newall Mfg. Co.
New Jersey Jewelers' Sup.
Rivett Lathe & Grinder
Sandvik Saw & Tool
Sickles Sons, Inc., M.
Wakmann Watch Co.
Waples, W. S.
Zenith Mfg. & Chem. Corp.

WATER ANALYSIS OUTFITS, Including Hardness Testers

Barnstead Still & Ster. Co.
Beckman Instruments
Bogue Electric
Burrell Corp.
Fisher Scientific
G. M. Mfg. Co.
Hagan Chem. & Controls
Hallikainen Inst.
Hellige, Inc.
Howe & French, Inc.
Industrial Instrs. Inc.
La Motte Chem. Prods.
Palo Lab. Supplies
Permutit Co.
Phipps & Bird
Precision Scientific
Scientific Glass App.
Taylor & Co., W. A.
Victoreen Instr. Co.
Wallace & Tiernan

WATER and SEDIMENT APPARATUS

Automatic Steam Products
B-I-F Industries
Barnstead Still & Ster. Co.
Bogue Electric
Central Scientific
Davis Reg. Co.
G. M. Mfg. Co.
Greiner, Emil
Hagan Chem. & Controls
Henry Valve
Infilco Inc.
Instruments Corp.
Kontes Glass
Labline, Inc.
Owens-Illinois
McAlear Mfg. Co.
Precision Scientific
R. K. L. Valve & Mfg. Co.
Wallace & Tiernan, Inc.
Weston Electl. Instr.

WATER BATHS, Constant Temperature, see Baths, also Laboratory Apparatus, also Temperature Calibration

WATER METERS, see Flowmeters, Positive Displacement.

WATER METER TESTERS, see Flow Calibrators

WATER WORKS INSTRUMENTS (see also Waste Treatment Instruments)

B-I-F Industries
Bailey Meter Co.
Barton Instr. Co.
Bristol Co.
Brooks Rotameter Co.
Builders-Providence
Consolidated Vacuum Corp.
Femco, Inc.
Fischer & Porter Co.
Fisher Research Lab.
Foxboro Co.
Greiner, Emil
Gurley, W. & L. E.
Hagan Chem. & Controls
Kates Co., W. A.
King Engrg. Corp.
Leeds & Northrup
Leupold & Stevens
Manning, Maxwell & Moore
Meriam Inst. Co.
Minneapolis-Honeywell
  Indust. Div.
Mason-Neilan Div.
New Jersey Meter Co.
Penn. Insts. Div.
Permutit Co.
Shand & Jurs Co.
Simplex Valve & Meter
Sparling Meter Co.
Taller & Cooper
Trimount Instr. Co.
Uehling Instr. Co.
Wallace & Tiernan
Warrick Co.
Weksler Thermometer

WATTHOUR METERS

Associated Research
Duncan Electric
Electron Radar Prod.
Ferranti Electric
Foxboro Co.
GE, Apparatus Sales
Landis & Gyr
Roller-Smith
Sangamo Electric
Simpson Electric
Sticht Co.
Sun Electric Corp.
Veeder-Root
Westinghouse Electric

WATTHOUR METER TESTERS

Davenport Mfg. Co.
Ducan Elec. Mfg.
Eastern Spec. Co.
Electron-Radar Prod.
GE, Apparatus Sales
Hathaway Instr. Co.
Kahn & Co.
Knopp Inc.
Multi-Amp. Corp.
Rockwell Engrg. Co.
Sangamo Electric
Sorsensen & Co.
States Co.
Westinghouse Electric

WATTMETERS, Clamp Type

Electro-Tech Equip.
GE Apparatus Sales
Martindale Electric
U. S. Gauge Div.
Weston Electcl. Instr.

WATTMETERS, Electrostatic

Amer. Mach. & Foundry
GE
Hickok Elec. Instruments
Sensitive Research Instr.

WATTMETERS, Indicating

Amer. Mach. & Foundry
Autocall Co.
Bristol Co.
Electronic Instr. Co.
Electro-Tech Equip.
Epic, Inc.
Fed. Telephone & Radio
Fluke Mfg. Co.
GE, Apparatus Sales
Hickok Electcl. Instr.
Industrial Test
Landis & Gyr
Niagara Elect. Instr.
Norton Electcl. Instr.
Physics Research
Precision Scientific
Radiation Inc.
Rawson Electcl. Instr.
Roller-Smith Co.
Sensitive Res. Instr.
Servonic Instruments
Simpson Electric
Sticht Co.
Sun Electric Corp.
Triplett Elect. Instr. Co.
United Electric
United Optical Mfg.
Welch Mfg. Co., W. M.
Westinghouse Electric
Weston Electcl. Instr.

WATTMETERS, Laboratory Standard

Bird Electronic
Cambridge Inst. Co.
Central Scientific
Computer Co. of Amer.
Cubic Corp.
Electrical Facilities Inc.
Electro-Tech Equip.
Epic, Inc.
GE, Apparatus Sales
Hickok Electcl. Instr. Co.
Oltronix Co.
Physics Research
Rawson Electcl. Instr.
Roller-Smith Inst.
Sensitive Res. Instr.
Simpson Electric Co.
Triplett Electr. Instr.
United Optical Mfg.
Welch Mfg. Co., W. M.
Westinghouse Electric
Weston Electcl. Instr.

WATTMETERS, Microwave

Aircraft Armaments
Amerac, Inc.
BJ Electronics
Bird Electronic
Brunswick Instruments
Chemalloy Electronics
Computer Co. of America
Cubic Corp.
DeMornay-Bonardi, Inc.
Electron-Radar Prods.
F-R Machine
Fed. Telephone & Radio
G. W. Associates
Hewlett-Packard
Hycon Mfg. Co.
Kearfott Co.
Marconi Instruments
Microwave Assocs.
Narda Corp.
New London Instr. Co.
Polytechnic Res. & Dev. Co.
Radiation, Inc.
RCA
Roller-Smith
Sierra Electronic Corp.
Sperry Gyroscope Co.
WacLine, Inc.
Weinschel Engrg. Co.

WATTMETERS, Reactive

Bristol Co.
Esterline-Angus
GE, Apparatus Sales
Landis & Gyr
Physics Research
Roller-Smith
United Optical Mfg.
Westinghouse Electric

WATTMETERS, Recording

Amer. Mach. & Foundry
Bristol Co.
Electro-Tech Equip.
Engrg. Enterprises
Esterline-Angus
GE, Apparatus Sales
Hathaway Instr. Co.
Hickok Electcl. Instr.
Roller-Smith
Sangamo Electric
Sensitive Research Instr.
Sticht Co.
Westinghouse Electric

WAVEGUIDES, see Microwave

WAVE METERS, see Frequency Indicators

WAX MELTING APPARATUS

Central Scientific
Devtronics, Inc.
Electric Hotpack Co.
Fisher Scientific
Greiner, Emil
Hacker & Co., W. J.
Hycon Mfg. Co.
Indust. Engrg. Corp.
Koehler Instr. Co.
Mason Instr. Co.
Precision Scientific
R. K. L. Valve & Mfg. Co.
Robinson Co., E. E.
Temperature Engrg
Weston Electcl. Instr.

WAXES

Bakelite Div.
Bethlehem Apparatus Co.
Carbon & Carbide Chem.
Du Pont
Durez Plastics
Huisking & Co.
Mitchell Rand Insulating
Nye, Inc., William F.
Sherwin-Williams Co.
Teichert Engrg. Co.
Zophar Mills, Inc.

WEATHERING TESTERS, see Environmental Test Chambers, also Fading Testers

WEATHERING MACHINES

Amer. Paulin System
Atlas Electric Devices
Rush Assoc., G. F
G.M. Mfg. Co.
Temperature Engrg.
Thermometer Corp.
Wallace & Tiernan, Inc.

WEIGHING BOTTLES

Ace Glass
Exact Weight Scale Co.
Fisher Scientific
Greiner, Emil
Kimble Glass Co.
Kontes Glass
Owens-Illinois

WEIGHING SCALES, Basic Weight

Amthor Testing Instr. Co.
Baldwin-Lima-Hamilton
Becker Div., Christian
Buffalo Scale
Cady & Co., E. J.
Chatillon & Sons
Detecto Scales, Inc.
Dillon & Co., W. C.
Exact Weight Scale
Fairbanks, Morse & Co
Gilmore Industries
Gurley, W. & L. E.
Hadley Assocs.
Howe Scale
Kent Cliff Labs. Div.
Link Engrg. Co.
Martin-Decker Corp
Ohaus Scale
Pneumatic Scale
Richardson Scale
Seederer-Kohlbusch
Streeter-Amet
Testing Machines, Inc.
Thayer Scale & Engrg.
Thwing-Albert
Toledo Scale
Triner Scale & Mfg.
Troemner Co., Henry

WEIGHING SCALES, Beam

Amer. Balance
Buffalo Scale
Chatillon & Sons
Detecto Scales
Exact Weight Scale
Fairbanks, Morse & Co.
Howe Scale
Jacobs Bros Co., Inc.
Kent Cliff Labs. Div.
Ohaus Scale
Pacific Scientific
Photoswitch, Inc.
Pneumatic Scale
Revere Copper & Brass
Schaar & Co.
Seedburo Equipt.
Seederer-Kohlbusch
Testing Machines, Inc.
Thayer Scale & Engrg.
Triner Scale & Mfg.
Troemner Co., Henry
Welch Mfg. Co., W. M.

WEIGHING SCALES, Conveyor

B-I-F Industries
Baldwin-Lima-Hamilton
Bell Automation Corp.
Builders-Providence
Chatillon & Sons
Detecto Scales
Dillon & Co., W. C.
Exact Weight Scale
Fairbanks, Morse & Co.
Gilmore Industries
Hadley Assocs.
Hagan Chem. & Controls
Howe Scale
Industrial Electronics
International Bus. Mach.
Martin-Decker Corp.
Merrick Scale Mfg. Co.
Monsell, J.R.
Omega Machine
Revere Copper & Brass
Richardson Scale
Schafter Poidometer Co.
Streeter-Amet
Thayer Scale & Engrg.
Toledo Scale
Trans-Weigh
Triner Scale & Mfg.
Wallace & Tiernan

WEIGHING SCALES, Counting

Amthor Testing Inst. Co.
Avion Div.
B-I-F Industries
Buffalo Scale

Chatillon & Sons
Detecto Scales
Exact Weight Scale
Fairbanks, Morse & Co.
Hadley Assocs.
Howe Scale
Industrial Electronics
International Bus. Mach.
Jacobs Bros. Co., Inc.
Kent Cliff Labs. Div.
Metrogram Corp.
Monsell, J. R.
Ohaus Scale
Potter Instr. Co.
Seederer-Kohlbusch
Taller & Cooper, Inc.
Thayer Scale & Engrg.
Toledo Scale
Torsion Balance
Triner Scale & Mfg.

WEIGHING SCALES, Crane

Baldwin-Lima-Hamilton
Buffalo Scale
Chatillon & Sons
Detecto Scales
Dillon & Co., W. C.
Emery Co., A. H.
Fairbanks, Morse & Co.
Gilmore Industries
Howe Scale Co.
Hydroway Scales
Martin-Decker Corp.
Streeter-Amet
Taller & Cooper Inc.
Thayer Scale & Engrg.
Toledo Scale
Triner Scale & Mfg.

WEIGHING SCALES, Differential

Baldwin-Lima-Hamilton
Detecto Scales.
Exact Weight Scale
Fairbanks, Morse & Co.
Howe Scale
Jacobs Bros. Co., Inc.
Kent Cliff Labs. Div.
Metrogram Corp.
Monsell, J. R.
Taller & Cooper
Testing Machines Inc.
Thayer Scale & Engrg.
Thwing-Albert
Triner Scale & Mfg.

WEIGHING SCALES, Dynamometer

Autom. Temp. Control
Central Scientific Co.
Chatillon & Sons
Conoflow Corp.
Detecto Scales
Dillon & Co., W. C.
Emery Co., A. H.
Exact Weight Scale
Fairbanks, Morse & Co.
Gilmore Industries
Hagan Chem. & Controls
Howe Scale
Link Engrg. Co.,
Martin-Decker Corp.
Maymer Corp.
Monsell, J. R.
Republic Flow Meters
Ruge Assocs.
Seederer-Kohlbusch
Stoelting Co., C. N.
Taller & Cooper
Testing Machines, Inc.
Toledo Scale
Welch Mfg. Co., W. M.

WEIGHING SCALES, Hopper

B-I-F Industries
Baldwin-Lima-Hamilton
Buffalo Scale Co.
Chatillon & Sons
Detecto Scales
Emery Co., A. H.
Exact Weight Scale
Fairbanks, Morse & Co.
Gilmore Industries
Hadley Assocs.
Howe Scale
Industrial Electronics
Jacobs Bros. Co.
Monsell, J. R.
Revere Copper & Brass
Richardson Scale Co.
Ruge Assocs.
Seedburo Equipment
Streeter-Amet
Taller & Cooper
Thayer Scale & Engrg.
Toledo Scale
Triner Scale & Mfg.

WEIGHING SCALES, Laboratory

Ace Glass Co.
Amer. Balance
Becker Div., Christian
Buffalo Scale
Central Scientific
Chatillon & Sons
Chicago Apparatus Co.
Detecto Scales
Dietert Co.
Eberbach Corp.
Exact Weight Scale
Fairbanks, Morse & Co.
Fisher Scientific
General Biological
Goetze Niemer Co.
Greiner, Emil
Hadley Assocs.
Heusser Instr. Mfg. Co.
Howe Scale
Humboldt Mfg. Co.
International Bus. Mach.
Jacobs Bros. Co., Inc.
Kent Cliff Labs Div.
LaPine & Co.
Metrogram Corp.
Microchemical Service
Ohaus Scale Corp.
Refinery Supply Co.
Roller-Smith Corp.
Schaar & Co.
Seedburo Equipment
Seederer-Kohlbusch
Sklar Des. Dev. Labs.
Standard Science Supply
Taller & Cooper
Testing Machines, Inc.
Thompson Balance
Toledo Scale
Torsion Balance
Triner Scale & Mfg.
Troemner Co., Henry
Voland & Sons
Welch Mfg. Co., W. M.
Wilkens-Anderson

WEIGHING SCALES, Platform

Baldwin-Lima-Hamilton
Becker Div., Christian
Buffalo Scale
Chatillon & Sons
Detecto Scales
Eckman Load Ind.
Exact Weight Scale
Fairbanks, Morse & Co.
Hadley Assocs.
Howe Scale
Humboldt Mfg. Co.
International Bus. Mach.
Monsell, J. R.
Revere Corp. of Amer.
Ruge Assocs.
Seedburo Equipment
Streeter-Amet
Taller & Cooper
Testing Machines, Inc.
Thayer Scale & Engrg.
Toledo Scale
Triner Scale & Mfg.
Weighing & Control Comps.

WEIGHING SCALES, Portable

Black & Decker
Buffalo Scale
Central Scientific
Chatillon & Sons
Detecto Scales
Dillon & Co., W. C.
Emery Co., A. H.
Exact Weight Scale
Fairbanks, Morse & Co.
Howe Scale
Hunter Spring Co.
International Bus. Mach.
Jacobs Bros. Co., Inc.
Martin-Decker Corp.
Pelouze Mfg. Co.
Revere Copper & Brass
Revere Corp. of Amer.
Richardson Scale
Seedburo Equipment
Seederer-Kohlbusch
Streeter-Amet
Taller & Cooper
Testing Machines, Inc.
Thayer Scale & Engrg.
Toledo Scale
Torsion Balance
Triner Scale & Mfg.
Troemner Co., Henry
Voland & Sons
Wallace & Tiernan, Inc.
Welch Mfg. Co., W. M.

WEIGHING SCALES, Predetermined Weight

Automatic Scale
Avion Div.
Bell Automation Corp.
Buffalo Scale
Chatillon & Sons
Detecto Scales
Exact Weight Scale
Fairbanks, Morse & Co.
Hadley Assocs.
Howe Scale
Indust. Electronic Engrs.
Industrial Electronics
International Bus. Mach.
Jacobs Bros. Co., Inc.
Kent Cliff Labs. Div.
Merrick Scale Mfg. Co.
Metrogram Corp.
Monsell, J. R.
Pneumatic Scale Corp.
Revere Copper & Brass
Richardson Scale
Schaffer Poidometer Co.
Seederer-Kohlbusch
Streeter-Amet
Taller & Cooper
Thayer Scale & Engrg.
Toledo Scale
Torsion Balance
Triner Scale & Mfg.
Wallace & Tiernan

WEIGHING SCALES, Recording and/or Remote Indicating, including Printout

Allegany Instr. Co.
Amer. Mach. & Foundry
Autom. Scale
Autom. Temp. Control
Avion Div.
B-I-F Industries
Baldwin-Lima-Hamilton
Becker Div., Christian
Bell Automation Corp.
Buffalo Scale
Builders-Providence
Chatillon & Sons
Conoflow Corp.
Daytronic Corp.
Detecto Scales
Eckman Load Ind.
Emery Co., A. H.
Exact Weight Scale
Fairbanks, Morse & Co.
Fielden Research
Gerber Scientific
Gilmore Industries
Hadley Assocs.
Hagan Corp.
Howe Scale
Indust. Electronic Engrs.
Industrial Electronics
International Bus. Mach.
Jacobs Bros. Co., Inc.
Jeffrey Mfg. Co.
Martin-Decker Corp.
Merrick Scale Mfg. Co.
Minnesota Electronics
Moister Register Co.
Monsell, J. R.
Omega Machine
Republic Flow Meters
Revere Copper & Brass
Revere Corp. of Amer.
Richardson Scale
Rockwell Engrg.
Ruge-de Forest, Inc.
Schaffer Poidometer Co.
Seedburo Equipment
Sheffield Corp.
Streeter-Amet
Taller & Cooper
Thayer Scale & Engrg.
Toledo Scale
Torsion Balance
Trans-Weigh Co.
Triangle Package Mach.
Triner Scale & Mfg.
Troemner, Henry
Virginia Electronics
Wallace & Tiernan
Weighing & Control Comps.

WEIGHING SCALES, Rolling Mill

Askania Reg. Co.
Autom. Temp. Control
Avion Div.
Baldwin-Lima-Hamilton
Bin-Dicator
Bristol Co.
Buffalo Scale
Builders-Providence
Chatillon & Sons
Cleveland Fuel
Daytronic Corp.
Detecto Scales
Electronic Prods. Co.
Fairbanks, Morse & Co.
Fielden Instr. Div.
Fuller Co.
Gaydon Co.
General Controls
Gilmore Industries
Howe Scale
Industrial Elect. Controls
Indust. Electronic Engrs.
Instruments Inc.
Jarco Services
Jeffrey Mfg. Co.
Lumenite Electronic Co.
Merrick Scale
Mosher Electronic
Nuclear Research Corp.
Ohmart Corp.
R-C Scientific Inst. Co.
Richardson Scale
Robinette Co., W. C.
Shallcross Controls
Streeter-Amet Co.
Synchro-Start Products
Taller & Cooper, Inc.
Techniflex Corp.
Toledo Scale Co.
Triner Scale & Mfg.
United Engineers
Viking Instruments
Worner Electronic Devices

WEIGHT CONTROLLERS, Bulk Material

Amer. Mach. & Foundry
Avion Div.
B-I-F Industries
Baldwin-Lima-Hamilton
Bell Automation
Buffalo Scale
Daytronic Corp.
Detecto Scales
Exact Weight Scale
Fairbanks, Morse & Co.
Gilmore Industries
Indust. Electronic Engrs.
Isotope Products, Inc.
Jeffrey Mfg.
Photobell Co.
R.K.L. Valve & Mfg. Co.
Revere Corp. of Amer.
Richardson Scale Co.
Syntron Co.
Taller & Cooper, Inc.
Thayer Scale & Engrg.
Toledo Scale Co.
Triner Scale & Mfg.
Wallace & Tiernan, Inc.

WEIGHT INDICATORS, Automatic Recording

Amer. Mach. & Foundry
Automation Management
Avion Div.
B-I-F Industries
Baldwin-Lima-Hamilton
Bell Automation Corp.
Bristol Co.
Buffalo Scale
Builders-Providence
Cameron Iron Works
Chatillon & Sons
Curtiss-Wright
Daytronic Corp.
Detecto Scales
Dillon & Co., W. C.
Eckman Load Ind.
Electrical Dev.
Exact Weight Scale
Fairbanks, Morse & Co.
Gilmore Industries
Howe Scale
Indust. Electronic Engrs.
International Bus. Mach.
Isotope Products, Inc.
Leeds & Northrup
Martin-Decker Corp.
Merrick Scale Mfg. Co.
Nuclear Research Corp.
Polyphase Instr. Co.
Revere Corp. of Amer.
Richardson Scale Co.
Robertshaw-Fulton Co.
Roller-Smith
Streeter-Amet
Taller & Cooper
Tech. Oil Tool Corp.
Thayer Scale & Engrg.
Toledo Scale
Triner Scale & Mfg.
Virginia Electronics
Wallace & Tiernan
Wiancko Engrg. Co.

WEIGHTS, Analytical

Ace Glass
Ainsworth & Sons
Aloe Co., A. S.
Amer. Balance
Becker Div., Christian
Central Scientific
Detecto Scales
Dietert Co.
Exact Weight Scale
Fisher Scientific
Greiner, Emil
Gurley, W. & L. E.
Hadley Assocs.
Howe Scale
Kent Cliff Labs. Div.
Ohaus Scale
Roller Smith
Schaar & Co.
Seedburo Equipment
Seederer-Kohlbusch
Standard Science Supply
Taller & Cooper
Testing Machines, Inc.
Thompson Balance
Torsion Balance Co.
Triner Scale & Mfg.
Troemner Co., Henry
Voland & Sons, Inc.

WEIGHTS, Avoirdupois, Metric or Troy

Ace Glass
Ainsworth & Sons
Amer. Balance
Becker Div., Christian
Brinkmann Instruments
Burke & James
Central Scientific Co.
Chicago Apparatus Co.
Detecto Scales
Exact Weight Scale
Fisher Scientific
Gaertner Scientific
Greiner, Emil
Gurley, W. & L. E
Hadley Assocs.
Howe Scale
Humboldt Mfg. Co.
Kent Cliff Labs. Div.
Metrogram Corp.
Ohaus Scale Corp.
Seederer-Kohlbusch
Standard Science Supply
Suter, Alfred
Thompson Balance
Toledo Scale
Torsion Balance Co.
Triner Scale & Mfg.
Troemner Co., Henry
Voland & Sons, Inc.

WEIGHTS, Test, see Weights, Avoirdupois, Metric or Troy

WEIGHTS & MEASURES, Precision Standard

Amer. Balance
Burrell Corp.
Detecto Scales
Gurley, W. & L. E.
Hadley Assocs.
Jacobs Bros. Co.
Kent Cliff Labs. Div.
Ohaus Scale
Pfaltz & Bauer, Inc.
Seederer-Kohlbusch
Seraphin Test Measure
Thompson Balance Co.
Torsion Balance Co.
Triner Scale & Mfg.
Troemner, Henry
Voland & Sons
Webber Gage Co.

WEIR METERS, see Flowmeters, Open Channel

WELDERS, Automatic

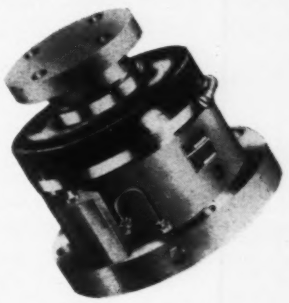
Aronson Machine Co
Ewald Instruments
Federal Mach. & Weld.
Federal Tool Engrg Co.
GE Apparatus Sales
Kahle Engrg. Co.
Linde Co.
Mann Co., Wm. I.

Emery

MAXIMUM ACCURACY IN LOAD AND FORCE MEASUREMENT

DEMANDS

EMERY LOAD CELLS



Wherever extreme accuracy and long, maintenance-free service life are factors in weighing and force measurement systems, industry calls on Emery Hydraulic Load Cells. These versatile weighing units can be teamed with practically any type of instrumentation to provide accurate weight or force indication, recording, printing or various control functions.

Emery Hydraulic Load Cells are being used by aircraft companies to measure jet engine and propeller thrust; in the automotive field for dynamometer applications; in the metalworking industry to measure forces in the dies of wire drawing or metal forming equipment; and in the processing industries to weigh tanks and portable cars used in blending operations.

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- **Dynamometer Scales**
- **Hydraulic Load Cells (Tension and Compression)**
- **Hydraulic Scales**
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- **Special Weighing Apparatus**

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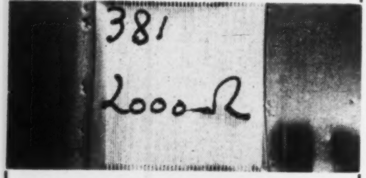
change resistance in a magnetic field; have thousands of uses for magnetic field and non-contact resistance - type measurements



$7.50 each

Size #1—1 15/16" x ⅞" x 0.007
Size #2— ¾" x ¼" x 0.007

Feature: Copper terminals for soldering leads; mounted on a flexible plastic; easy to install in air gap of magnets for gauss measurements and electronic controls; resistance change follows Smithsonian table values.

Capacity: one milliampere. Size #1 is made in 3000 ohm, 2500 ohm, 2000 ohm, 1500 ohm, and 1000 ohm regular stock; also from 250 ohm to 1950 ohm in odd sizes for experimental values. Size #2 made in 300 ohm, 275 ohm, 250 ohm, 225 ohm, 200 ohm, 175 ohm, and 150 ohm.

Fitzpatrick Electric Supply Co.
444 Irwin St. Muskegon, Mich.

For more information circle **408** on inquiry card.

Metal & Thermit
Peer, Inc.
Raytheon Mfg. Co.
Sheffield Corp.
Taylor-Winfield Corp.
Thermo Prods. Co.
Unitek Corp.
Vacuum Tube Prods. Co.
Westinghouse Electric

WELDING EQUIPMENT, Control Systems

Allen-Bradley Co.
Amer. Gas Accumulator
Autom. Temp. Control
Automatic Methods
Bastian Blessing
Booth Co., Arthur E.
Cramer Contr. Co.
Cutler-Hammer
Dietz Co., Henry G.
Electronic Controls
Electronic Prods. Co.
Electronics Corp. of Amer.
Electyme Motor Prods.
Ewald Instruments
Elgin Natl. Watch
Farmer Electric
Federal Mach. & Weld.
Federal Tool Engrg. Co.
Fisher Governor Co.
General Control (Mass.)
GE, Apparatus Sales
Grove Valve & Regu. Co.
Hoke, Inc.
Industrial Timer
Kahle Engrg. Co.
Linde Co.
Lumenite Electronic
Mullenbach Div.
National Time & Signal
New Haven Clock
Peer, Inc.
Polyphase Instr. Co.
Photovolt Corp.
Raytheon Mfg. Co.
Robotron Corp.
Square D Co.
Stewart Instr. Co.
Taylor-Winfield Corp.
Timetrol Co.
Vacuum Tube Prods.
Wilson & Co., G. C.
Worthington Corp.

WELDING EQUIPMENT, Oxyacetylene

Bastian-Blessing
Grammes & Sons
Linde Co.
National Cylinder Gas

WELDING EQUIPMENT, Spot

DoAll Co.
Ewald Instruments
Federal Mach. & Welder
Federal Tool Engrg. Co.
Fusion Engrg. Co.
Grammes & Sons, Inc.
Kahle Engrg. Co.
Linde Co.
Mallory & Co., P. R.
National Cylinder Gas
Peer, Inc.
Raytheon Mfg. Co.
Sciaky Bros., Inc.
Sittler Corp.
Taylor-Winfield Corp.
Unitek Corp.
Vacuum Tube Prods. Co.
Weldmatic Div.
Westinghouse Electric

WELDING EQUIPMENT, Stored-Energy

Ewald Instruments
Federal Tool Engrg. Co.
Fruengel, Inc.
Kahle Engrg. Co.
Raytheon Mfg. Co.
Taylor-Winfield Corp.
Unitek Corp.
Vacuum Tube Prods. Co.
Weldmatic Div.

WELLS, Thermocouple or Thermometer, see Thermowells

WHEELS, Sapphire, Grinding & Burnishing

Alpha American Corp.
Bird & Co., Richard H.
Blanchard Machine Co.
Elgin National Watch
Engis Equipment
Fish-Schurman
Gatti, Inc., Aurele M.
Greenlee Co.
Industrial Abrasives
Jadow Inc., B.
North Amer. Philips Co.
Powers, Geo.
Raybestos-Manhattan
U.S. Rubber Co.
Vallorbs Jewel
Worley Jewel Co., John

WICKS FOR WET BULBS

Auburn Mfg. Co.
Bristol Co.
Hill & Co., E. Vernon
Selsi Co., Inc.
Precision Thermom.
Teichert Engrg. Co.
Taylor Instr. Cos.

WIND DIRECTION and VELOCITY INDICATORS and/or RECORDERS, see Meteorological Instruments, also Anemometers

WIND TUNNEL INSTRUMENTS

Aero Research Instr. Co.
Aerotech Specialties
Airborne Instruments
Airflo Instr. Co.
Askania Reg. Co.
Autom. Temp. Control
Barton Instr.
Bendix, Friez Instr. Div.
Benson-Lehner Corp.
Bristol Co.
Brono tics Co.
Century Electronics & Insts.
Colvin Labs., Inc.
Conoflow Corp.
Dayton Instruments
Electrical Dev.
Fischer & Porter Co.
Fish-Schurman
Franklin Electronics
Flow Corp.
Gaertner Scientific
Genisco Inc.
Giannini & Co.
Gilmore Industries
Hagan Chem. & Controls
Hanson-Gorrill-Brian
Hastings Instr. Co.
Hill & Co., E. Vernon
Huggins Labs.
Ideal Lab. Tools
Illinois Testing Labs.
Industrial Electronics
Instrument Lab., Inc.
Jarrell-Ash
King Eng.
Kistler Instr. Co.
Kybernetes Corp.
Laboratory Optical
Leeds & Northrup
Mann Co., W. I.
Manning, Maxwell & Moore
North American Instr.
Oltronix Co.
Palos Optical Co.
Penn Insts. Div.
Potter Instrument
Scientific Instr. Co
Statham Labs.
Stratex Instr. Co.
Taller & Copper, Inc.
Task Corp.
Taylor Instr. Cos.
Tinsley Labs.
Toledo Scale
Trimount Instr. Co.
Topp Industries, Inc.
Unertl Optical Co., John
Wallace & Tiernan, Inc.
Westberg Mfg. Co.
Wiancko Engrg. Co.

WIRE, Aluminum

Acme Wire Co.
All-State Welding Alloys
Aluminum Co. of Amer.
American Brass Co.
Anaconda Wire & Cable
Belden Mfg. Co.
Chester Cable Corp.
Cohn Corp., Sigmund
Consolidated Wire
Driver Co., Wilbur B.
Essex Wire Corp.
General Alloy Co.
Hubbell Metals
Magnet Wire Div.
Nesor Alloy Prods.
North Amer. Philips Co.
Okonite Co.
Paul & Stein Bros.
Precision Tube Co.
Rea Magnet Wire Co.
Reynolds Metals Co.
Roebling's Sons Co.
Rome Cable Corp.
Secon Metals Corp.
Sigmund Cohn Mfg. Co.
Uniform Tubes

WIRE, Beryllium Copper and Copper

Belden Mfg. Co.
Beryllium Corp.
Bridgeport Ins. Wire
Cohn Corp., Sigmund
Driver Co., Wilbur B.
Everett Prods. Inc.
Instrument Specialties
Magnet Wire Div.
Mallory & Co., P. R.
Nesor Alloy Prods.
Scovill Mfg. Co.
Secon Metals Corp.
Sylvania Elct. Prod.
Warren Wire
Wilson Co., H. A.

WIRE, Copper, Enameled

Acme Wire Co.
Amer. Brass Co.
Anaconda Wire & Cable
Belden Mfg. Co.
Birnbach Radio Co.
Cohn Corp., Sigmund
Consolidated Wire
Electric Auto-Lite Co.
E-Nam Corp.
Essex Wire Corp.
GE
GE Const. Materials Div.
General Winding Co.
Gordon Co., Claud S.
Hitemp Wires, Inc.
Insuline Corp.
Magnet Wire Div.
Newark Electric Co.
North Amer. Philips Co.
Okonite Co.
Rea Magnet Wire Co.
Roebling's Sons Co.
Secon Metals Corp.
Thermo Nuclear Wire Indus.
Warren Wire Co.
Wheeler Insul. Wire, Inc.

WIRE, Covered

Acme Wire Co.
Amer. Brass Co.
Anaconda Wire & Cable
Belden Mfg. Co.
Boston Insul. Wire
Birnbach Radio Co.
Brand & Co., William
Chester Cable Corp.
Consolidated Wire
Continental Wire
Crescent Insd. Wir. & Cbl.
Driver-Harris Co.
E-Nam Corp.
Essex Wire Corp.
GE
GE Const. Materials Div.
Gordon Co., Claud S.
Hitemp Wires, Inc.
Insuline Corp.
Koiled Kords, Inc.
Lenz Elect. & Mfg. Co.
Lewis Engrg. Co.
Magnet Wire Div.
Newark Electric Co.
Okonite Co.
Roebling's Sons Co
Rome Cable Co.
Secon Metals Corp.
Sequoia Wire
Surprenant Mfg. Co.
Tensolite Insul. Wire Co.
Thermo Nuclear Wire Indus.
U. S. Rubber Co.
Warren Wire.
Wheeler Insul. Wire, Inc.
Whitney Blake

WIRE, Extruded

All-States Welding Alloys
Alpha Metals, Inc.
Amer. Brass Co.
Anaconda Wire & Cable
Baker & Co., Inc.
Belmont Smlt. & Refg.
Birnbach Radio Co.
Brand Co.
Cherry-Channer Corp.
Chester Cable Corp.
Consolidated Wire
Continental Wire
Detroit Gasket & Mfg.
Essex Wire Corp.
General Electric Co.
GE Const. Materials Div.
Gordon Co., Claud S.
Hitemp Wires, Inc.
International Nickel
Lenz Elect. & Mfg. Co.
Magnet Wire Div.
Okonite Co.
Phalo Plastics
Progress Electronic
Roebling's Sons Co.
Scovill Mfg. Co.
Surprenant Mfg. Co.
Tensolite Insul. Wire Co.
Thermo Nuclear Wire Indus.
Warren Wire Co.

WIRE, Fine, Electroplated

Chester Cable Corp.
Cohn Corp., Sigmund
Consolidated Wire
Crucible Steel Co.
Magnet Wire Div.
North Amer. Phillips Co.
Red Magnet Wire Co.
Rome Cable Corp.
Secon Metal Corp.
Sequoia Wire Div.
Sylvania Elect. Prods.

WIRE, Fuse

Alpha Metals, Inc.
Baker & Co., Inc.
Cohn Corp., Sigmund
GE
Nesor Alloy Prods. Co.
Roebling's Sons Co.
Secon Metal Corp.

WIRE, Insulated, all Insulations except enameled and refractory

Acme Wire Co.
Aero Res. Instr. Co.
Amer. Brass Co.
Amphenol Electronics
Anaconda Wire & Cable
Bakelite Corp.
Belden Mfg. Co.
Birnbach Radio Co.
Blake Co., Whitney
Boston Insul. Wire
Brand & Co., William
Bridgeport Insulated Wire
Carpenter Steel Co.
Chester Cable Corp.
Collyer Indus. Wire
Consolidated Wire
Continental Wire
Crescent Insul. Wire
Driver Co., Wilbur B.
Driver-Harris Co.
Electric Auto-Lite Co.
E-Nam Corp.
Essex Wire Corp.
Federal Tel. & Rad.
GE
GE Const. Materials Div.
Gordon Co., Claud S.
Hitemp Wires, Inc.
Jelliff Mfg. Corp.
Koiled Kords, Inc.
Lenz Elect. & Mfg.
Magnet Wire Div.
Newark Electric Co.
Okonite Co.
Phalo Plastics Corp.
Rea Magnet Wire
Revere Corp. of Amer.
Rex Corp.
Roebling's Sons Co.
Rome Cable Co.
Sequoia Process Corp.
Secon Metals Corp.
Surprenant Mfg. Co.
Tensolite Insul. Wire Co.
Thermo Nuclear Wire Indus.
U. S. Rubber Co.
Warren Wire Co.
Watertown Mfg. Co.
Wheeler Insul. Wire, Inc.
Whitney Blake Co.

WIRE, Invar

Acme Wire Co.
Carpenter Steel Co.

Crucible Steel Co. of Amer.
Driver-Harris Co.
Elect. Auto-Lite Co.
Ferner Co., R. Y.
Hamilton Watch
Thermo Nuclear Wire Indus.
Universal-Cyclops
Wilson Co., H. A.

WIRE, Kovar

Driver Co., Wilbur B.
Driver-Harris Co.
Stupakoff Div.
Sylvania Elect. Prods.
Thermo Nuclear Wire Indus.
Universal-Cyclops
Westinghouse Elec. Corp.

WIRE, Laminated

General Plate Div.
Kellogg Switchbd. & Sup.
Secon Metal Corp.
Wilson Co., H. A.

WIRE, Magnet

Acme Wire Co.
Allegheny Ludlum Steel
American Brass Co.
Anaconda Wire & Cable
Belden Mfg. Co.
Birnbach Radio Co.
Bridgeport Insulated Wire
Chase Brass & Copper
Crescent Insd. Wir. & Cbl.
Consolidated Wire
Crucible Steel Co. of Am.
Electric Auto-Lite Co.
Essex Wire Corp.
GE
GE Const. Materials Div.
General Winding Co.
Hitemp Wires, Inc.
Magnet Wire Div.
Newark Electric Co.
North Amer. Philips Co.
Okonite Co.
Rea Magnet Wire Co.
Roebling's Sons Co.
Rome Cable Co.
Secon Metals Corp.
Sprague Electric Co
Sylvania Elect. Prods.
Tensolite Insul. Wire Co.
Thermo Nuclear Wire Indus.
Warren Wire Co.
Wheeler Insul. Wire, Inc.

WIRE, Metal Shielded

Airflo Instr. Co.
Alpha Metals, Inc.
Amer. Brass Co.
Anaconda Wire & Cable
Birnbach Radio Co.
Boston Insul. Wire
Breeze Corps.
Chester Cable Corp.
Collyer Indus. Wire
Consolidated Wire
Continental Wire
Crescent Insd. Wir. & Cbl.
Elect. Auto-Lite Co.
GE
GE Const. Materials Div.
Hitemp Wires, Inc.
Koiled Kords, Inc.
Lenz Elect. & Mfg. Co.
Lewis Engrg. Co.
Magnet Wire Div.
Microdot, Inc.
Newark Electric Co.
Precision Tube Co.
Roebling's Sons Co.
Rome Cable Corp.
Sequoia Wire
Surprenant Mfg. Co.
Uniform Tubes, Inc.
Warren Wire Co.
Whitney Blake Co.
Wilson Co., H. A.

WIRE, Miscellaneous, including Bismuth, Columbium, Illium, Molybdenum, special alloy Tantalum

Alpha Metals, Inc.
Anaconda Wire & Cable
Baker & Co., Inc.
Belmont Smg. & Rfg.
Bishop Platinum Works
Cerro de Pasco Corp.
Cleveland Tungsten
Crucible Steel Co. of Amer.
Division Lead Co.
Driver Co., Wilbur B.
Easton Mfg. Co.
Electronic Parts Mfg.
Fansteel Metallurgical
Fitzpatrick Electric Supply Co.
GE, Lamp Wire Dept.
Haynes Stellite Co.
Kemet Div
Mallory & Co., P. R.
North Amer. Philips
Sylvania Elec. Prod., Inc.
Westinghouse Electric

WIRE, Music, see Wire, Spring

WIRE, Nickel, Monel and Nickel Chromium

Amer. Chain & Cable
Bishop & Co., J.
Carpenter Steel Co.
Cohn Corp., Sigmund
Consolidated Wire
Crucible Steel of Amer.
Driver Co., Wilbur B.
Driver-Harris Co.
Eaton Mfg., Rel. Div.
Elgin Nat'l. Watch Co.
General Alloy Co., Inc.
General Plate Co.
Hamilton Watch
Haynes Stellite Co.
Hoskins Mfg. Co.
Jelliff Mfg. Corp., C. O.
Jessop Steel Co.
Kanthal Corp.
Michigan Steel Casting
Nesor Alloy Prods. Co.
North Amer. Phillips Co.
Precision Resistor Co.
Sylvania Elec. Prod., Inc.
Thermo Nuclear Wire Indus.
Universal-Cyclops

WIRE, Refractory Insulated

Aero Research Instr. Co.
Airflo Instr. Co.
American Wire Div.
Consolidated Wire
Harco Laboratories
Roebling's Sons Co.
Stupakoff Ceramic & Mfg.

WIRE, Resistance (Platinum or Platinum-Iridium)

Amer. Electro-Metal
Amer. Platinum Works
Baker & Co.
Bishop & Co., J.
Chester Cable Corp.
Cohn Corp., Sigmund
Fineisen, A. R.
General Plate Div.
Gordon Co., Claud S.
Mallory & Co., P. R.
Newark Electric Co.
Ney Co., J. M.
Secon Metal Corp.
Sylvania Elect. Prods.
Thermo Nuclear Wire Indus.
Thwing-Albert
Wilson Co., H. A.

WIRE, Resistance, except Platinum and Platinum-Iridium

Allegheny Ludlum Steel
Baker & Co., Inc.
Bishop Platinum Works
Carpenter Steel Co.
Cohn Corp., Sigmund
Consolidated Wire
Crucible Steel of Amer.
Driver Co., Willbur B.
Driver Harris Co.
General Plate Co.
General Winding Co.
Hoskins Mfg. Co.
Jelliff Mfg. Co., C. O.
Kanthal Corp.
Lewis Engrg. Co.
Ney Co., J. M.
North Amer. Philips Co.
Precision Resistor Co.
Riverside Metal Co.
Roebling's Sons Co.
Schnitzer Alloy Prods.
Secon Metals Corp.
Universal-Cyclops

WIRE, Round Edge, Flat, Nickel or Chromium Finished

American Brass
Amer. Chain & Cable
Amer. Nickeloid Co.
Amer. Steel & Wire
Crucible Steel Co. of Am.
Driver Co., Wilbur B.
Driver-Harris Co.
Eaton Mfg. Co.
Hoskins Mfg. Co.
Jelliff Mfg. Corp.
Page Steel & Wire Div.
Secon Metals Corp.
Sigmund Cohn Mfg.
Sylvania Elect. Prods.

WIRE, Round Edge, Flat, Phosphor Bronze

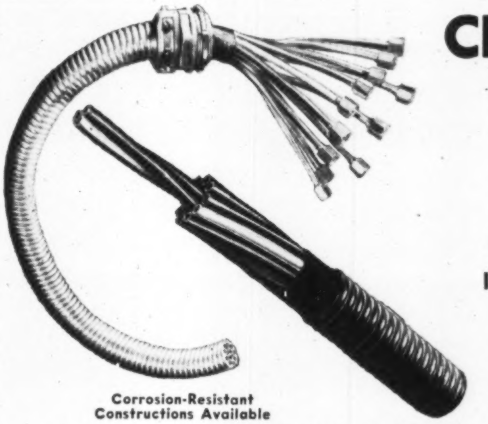
Allied Prods. Div.
Amer. Brass Co.
Bridgeport Brass Co.
Driver Co., Wilbur B.
Eaton Mfg., Rel. Div.
North Amer. Phillips Co.
Pecision Prods. Co.
Roebling's Sons Co.
Scovill Mfg. Co.
Secon Metals Corp.
Sylvania Elect. Prods.

WIRE, Sheared and Special Rolled

Allied Prods. Div.
Amer. Chain & Cable
Fineisen, A. R.
Precision Products Co.
Roebling's Sons Co.
Secon Metals Corp.
Sigmund Cohn Mfg.

WIRE, Spring

Allegheny Ludlum Steel
Allied Prods. Div.
Amer. Brass Co.
Amer. Chain & Cable
Baker & Co., Inc.
Beryllium Corp.
Bridgeport Brass Co.
Chase Brass & Copper
Chatillon & Sons
Crucible Steel of Amer.
Driver Co., Wilbur B.
Driver-Harris Co.
Eaton Mfg., Rel Div.
Ferner Co., R. Y.
Gallien, R. P.
Halcomb Steel Co.
Instr. Specialties Co.
Jadow, Inc.
Jessop Steel Co.
Modern Technical
Page Steel & Wire Div.
Roebling's Sons Co.
Scovill Mfg. Co.
Sylvania Elect. Prods.
Universal-Cyclops



CRESCENT
IMPROVED
CABLED
TUBING

for use with
INSTRUMENTS
and
PROCESS
CONTROL
EQUIPMENT

Corrosion-Resistant
Constructions Available

CRESCENT
ARMORED MULTITUBE

CRESCENT ARMORED MULTITUBE* is a group of tubes spirally cabled together. One tube in each layer is a bright blue color, which makes identification of any tube at both ends an easy matter.

Users report savings in installed cost of from two to five times the cost of CRESCENT ARMORED MULTITUBE as compared with the old method of using single tubes. Using the MULTITUBE system will result in fewer connections and fittings, lower cost for supports or racks, ease of mounting and less space.

The spiral cabling of the tubes prevents distortion when the entire assembly is bent on a short radius. The tubing assembly is protected by a flexible, interlocked galvanized steel armor, or by a tough corrosion-resistant thermoplastic sheath.

Furnished in from 2 to 37 Tubes of copper, aluminum, steel, polyethylene. Also special construction for underground runs. This product is licensed under U. S. Patent 2,578,280.

* Registered Trademark

Send for Technical Bulletin No. 356-J Giving Complete Information

CRESCENT INSULATED WIRE & CABLE CO.

For more information circle **409** on inquiry card.

Super-Temp

Teflon* Insulated
Magnet Wires
Hook-up Wires
Cables
Tubing

SPECIALTY WIRES USING
TEFLON, GLASS AND SILICONE

*duPont Polytetrafluoroethylene

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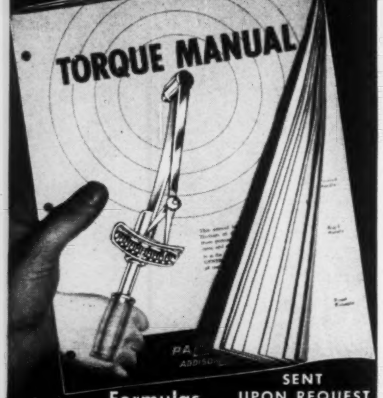
For Technical Information, Prices & Deliveries Call

American Super-Temp Wires, Inc.
West Canal St., Winooski, Vt.
Burlington 2-9636

GENERAL SALES OFFICE
195 Nassau St., Princeton, N. J.
Phone Princeton 1-4450

For more information circle **410** on inquiry card.

"TORQUE WRENCH" MANUAL



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Formulas
Applications
Engineering Data
Screw Torque Data
Adapter Problems
General Principles

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

Manufacturers of over 85% of the torque wrenches used in industry

For more information circle 411 on inquiry card.

Watch-Motor Mainspring
Wilson Co., H. A.

WIRE, Stainless Steel, see Wire, Spring

WIRE, Swedish Music, see Wire, Spring

WIRE, Thermocouple, Base Metal
Aero Research Instr. Co.
Airflo Instr. Co.
Amer. Chain & Cable
Assembly Products
Baker & Co., Inc.
Barber-Colman
Boston Insul. Wire
Bristol Co.
Chester Cable Corp.
Cohn Corp., Sigmund
Driver Co., Wilbur B.
Driver-Harris Co.
Electro-Tech Equip.
Foxboro Co.
GE, Apparatus Sales
General Controls
General Plate Div.
Gordon Co., Claud S.
Harco Labs.
Hoskins Mfg. Co.
Illinois Testing Labs.
Leeds & Northrup
Lewis Engrg. Co.
Minneapolis-Honeywell Indust. Div.
Page Steel & Wire Div.
Precision Tube Co.
Pyrometer Instrument Co.
Richards Co., Arklay S.
Tensolite Insul. Wire Co.
Thermo-Electric Co.
Thwing-Albert Inst.
Uniform Tubes
West Instr. Corp.
Winslow Co., Inc.

WIRE, Thermocouple, Rare Metal
Aero Research Instr. Co.
Amer. Platinum Works
Baker & Co., Inc.
Barber-Colman
Bishop Platinum Works
Bishop & Co., J.
Boston Insul. Wire
Bristol Co.
Cohn Corp. Sigmund
Electro-Tech Equip.
Foxboro Co.
General Controls
G. E. Apparatus Sales
General Plate Div.
Gordon Co. Claud S.
Hauco Labs.
Illinois Testing Labs.
Leeds & Northrup
Lewis Engrg. Co.
Minneapolis-Honeywell Indust. Div.
Pyrometer Instr. Co.
Richards Co., Arklay S.
Secon Metal Corp.
Tensolite Insul. Wire Co.
Thermo-Electric Co.
Thermo Nuclear Wire Indus.
Thwing-Albert
Uniform Tubes
West Instr. Corp.
Wilson Co., A. H.
Winslow Co.

WIRE, Thermocouple, Special, High emf
Aero Research Instr. Co.
Amer. Platinum Works
Baker & Co., Inc.
Barber-Colman
Bishop Platinum Works
Bristol Co.
Cohn Corp., Sigmund
Driver Co., Wilbur B.
GE, Apparatus Sales
Gordon Co., Claud S.
Harco Labs.
Lewis Engrg. Co.
Pyrometer Instr. Co.
Richards Co., Arklay S.
Secon Metal Corp.
Tensolite Insul. Wire Co.
Thermo-Electric Co.
Thermo Nuclear Wire Indus.
Uniform Tubes
Winslow Co., Inc.

WIRE, Tungsten
Cleveland Tungsten, Inc.
Electronic Parts Mfg.
Fansteel Metallurgical
GE, Lamp Wire Dept.
Mallory & Co., P. R.
North Amer. Philips
Sylvania Elect. Prods.
Westinghouse Electric
Wilson Co., H. A.

WIRE, Wollaston (For Cross Wires)
Amer. Platinum Works
Baker & Co., Inc.
Bishop & Co., J.
Cohn Corp., Sigmund
Secon Metal Corp.

WIRE MEASURING GAGES, see Dimensional Gages

WIRE TESTING MACHINES
Amthor Testing Instr. Co.
Amsler Buehler
Ann Arbor Inst. Wks.
Baldwin-Lima-Hamilton
Bush Associates, G. F.
Chatillon & Sons
Custom Scientific Inst.
Davenport Mfg.
Davis Electric
Detroit Testing Mach. Co.
Dillon & Co., W. C.
GE
Gilmore Industries
Hacker & Co.
Hunter Spring Co.
Instron Eng. Corp.
Kahle Engrg. Co.
Krouse Testing Mach.
Magnaflux Corp.
Manson Labs
Norcross Corp.
Olsen Testing Machine
Peschel Electronics
Riehle Testing Machines
Rubicon Co.
Scott Testers, Inc.
Standard Electric
Std. Electronic Res.
Steel City Testing Machs.
Taber Instr. Co.
Testing Machines, Inc.
Thwing-Albert

WIRES, Gear Measuring
Acme Industrial
Sheffield Corp.
Size Control Co.
Van Keuren Co.

WIRES, Thread Measuring
Brown & Sharpe
Elgin National Watch
Ferner Co.
Pratt & Whitney
Presin Co.
Scherr Co. Inc.
Sheffield Gage
Size Control Co.
Taft-Peirce Mfg. Co.
Van Keuren Co.

WORMS and WORM GEARING, see Gears, Precision

WOW METER
Amplifier Corp. of Amer.
Brush Electronics
Donner Scientific
D & R Limited
Furst Electronics
Kay Electric Co.

WRAPPING MATERIALS, see Packaging

WRENCHES, Socket Instrument
Allen Mfg. Co.
Armstrong Bros. Tool
Bergander Mfg. Co.
Brazilian Trading Co.
Bristol Co.
Chicago Screw Co.
Cook Electric
Crawford Fitting Co.
Eastern Specialty Co.
Elect. Tachometer Co.
Hartford Machine Screw
Hirschmann Co., Carl
Ideal Aerosmith
Insuline Corp.
Kendrick & Davis Co.
Lynn, Robert M.
Morris Co., J. I.
National Spectrographic
PIC Design Corp.
Stevens Walden, Inc.
Vaco Prods. Co.
Woodruff & Stokes

WRENCHES, Torque
Ingersoll-Rand
Jo-Line Tools, Inc.
Lynn, Robert M.
Richmont, Inc.
Skyway Precision
Sturtevant Co., P. A.
Waters Mfg.

XEROGRAPHY EQUIPMENT
Haloid Co.

X-RAY CAMERAS, Diffraction
Amer. Instr. Co.
Beattie-Coleman
Central Research Labs.
Distillation Products
Farrand Optical Co.
GE, X-Ray Dept.
Hayes Scientific App.
Hulcher Co., Charles
Jarrell-Ash Co.
Mitchell Radiation Prod.
North Amer. Philips Co.
Picker X-Ray
RCA Div.
Scient. Inst. Dev. Lab.
Summers Gyroscope
Wyland, G. C.

When using this Guide, look under the variable, e.g., Pressure Gages (not Gages, Pressure); or look under the noun—Magnets, Permanent (not Permanent Magnets).

X-RAY EQUIPMENT (See also Flaw Detection)
Allis-Chalmers
Aloe Co., A. S.
Andreasen, Inc., Holger
Applied Research Labs.
Baird Assocs.-Atomic
Balteau X-Ray Dept.
Bar-Ray Products
Bendix, Friez Instr. Div.
Campbell Electric
Del Electronics
Deltron, Inc.
Dice Co., J. W.
Eastman Kodak Co.
Ercona Corp.
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GE, X-Ray Dept.
Hayes Scientific App.
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Patterson Screen Co.
Picker X-Ray Corp.
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Universal X-Ray Prod., Inc.
Westinghouse Electric
Westinghouse X-Ray Co.
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NRD Instrument
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Ohmart Corp.
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X-RAY SPECTROGRAPHS, see Spectrographs, X-Ray

X-RAY SPECTROMETERS, see Spectrometers, X-Ray

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THE MOSELEY

AUTOGRAF

trade mark

X-Y RECORDER & ACCESSORIES

Model 1 AUTOGRAF

A portable drum type X-Y Recorder; accepts 8½"x11" paper; independent servo-actuated drives for each axis; input ranges 5 MV to 100 volts; 200,000 ohms/volt input resistance; less than 1 second plotting speed for full scale travel; ±0.25% accuracy and resolution; available for use as curve follower.

Model F-1 Curve Follower Adaptor

An adaptor unit designed for use directly with Model 2A or 4 AUTOGRAF; converts graphic information to voltage or point form from conducting curves; may also be used with Models 1, 3, and 5 with suitable modification of recorders; 10 inches per second reproducing rate; furnished with all necessary installation accessories.

Model 60 Logarithmic Converter

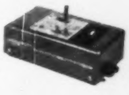
Converts DC or AC input voltages to DC voltages proportional to the logarithm of the amplitude of the input voltage; self contained power supply; better than 60 db dynamic range; 20 to 20,000 cps; accuracy ±½db; output ranges, 5, 10, 20 db per inch; speed 20 db per second.

Model 2A AUTOGRAF

Flat-bed bench type X-Y Recorder; accepts up to 11"x17" paper; input ranges 5 MV to 150 volts; input filters; zero offset; built-in vacuum paper hold-down; 200,000 ohms/volt input resistance; less than 1 second plotting speed for full scale travel; inputs for curve follower, point plotter, card or tape translator; ±0.25% accuracy and resolution.

Model 40A Keyboard

Full keyboard type; 30 keys for each axis; also available in 10 key; connects directly to Model 2A and 4 AUTOGRAF; built-in regulated power supply; plots from zero to ±1999 on each axis; 0.10% digital to analog conversion accuracy; special circuits for calibration, error detection, and selection of 'hold" or "automatic clear" on each axis.



Type B-2 Time Base

An independent, self-contained unit for sweeping one axis of an AUTOGRAF X-Y Recorder at accurately calibrated rates; built-in power supply, potentiometer, synchronous motor, gear train, and shifting mechanism; drive speeds of 1, 10, 100, and 1000 seconds for full scale sweep; instantaneous starting with magnetic clutch; variable excitation voltage.

Model 3 AUTOGRAF

Flat-bed table-top X-Y Recorder; accepts 8½"x11" paper; input ranges 5 MV to 500 volts, calibrated or continuous; input filters; zero offset; positive clamp-type paper hold-down; 200,000 ohms/volt input resistance; ½ second plotting speed for full scale travel; ±0.25% accuracy and resolution.

Model 51 Step Input

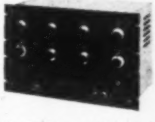
Advances one axis of an AUTOGRAF X-Y Recorder in controlled incremental steps; self contained, requiring only contact closure to initiate step operation; scale factors of 1, 2, 5, 10, 50, 100, and 200 steps per inch; maximum of 999 steps; maximum speed 60 pulses per second; visual step indicator; 5¼" rack mounting panel.

Model 20 DC Voltmeter

A high accuracy servo-actuated, multi-range DC Voltmeter with large, easy to read scale; eleven ranges from 3 MV to 300 volts, full scale; internal calibration cell; input resistance, 200,000 ohms/volt up to 30 volt scale, 20,000 ohms/volt on 300 volt scale; zero left and zero center adjustment feature; 0.25% accuracy on all ranges.

Model 4 AUTOGRAF

Rack mounting X-Y Recorder; vertical flat recording surface; accepts up to 11"x17" paper; built-in vacuum paper hold-down; input ranges 5 MV to 150 volts, calibrated or continuous; input filters; zero offset; 200,000 ohms/volt input resistance; less than 1 second plotting speed for full scale travel; ±0.25% accuracy and resolution; inputs for curve follower, point plotter, card or tape translator; 19¼" panel.

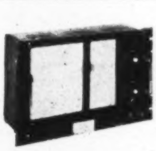


Model 30A Card Translator

For use with Model 2A or 4 AUTOGRAF to convert output pulses from IBM Summary Punch to analog voltages for automatic plotting; speed of 50 cards per minute, maximum; 10, 20, 50, 100, or 200 counts per inch; calibration by switch or calibrator card; automatic or manual feed; 0.10% accuracy; mounted on 12¼" standard panel, 11½" deep.

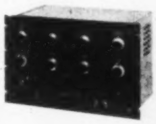
Clary Printer and Model C-1 (2, 3) Accessory Panel

A Clary Printer, Model 1900, is specially wired for use with a Coleman Digitizer and Moseley Accessory Panel to provide "on demand" printed readout of DC signals from the Model 20 DC Voltmeter. Also may be used for readout from shaft rotation. Available for 3, 4, and 5 decade Digitizers.



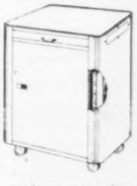
Model 5 AUTOGRAF

Rack mounting X-Y Recorder; vertical flat recording surface; accepts 8½"x11" paper; positive clamp-type paper hold-down; input ranges 5 MV to 500 volts; input filters; zero offset; 200,000 ohms/volt input resistance; ½ second plotting speed for full scale travel; 0.25% accuracy and resolution; 12¼" panel.



Model 50 Tape Translator

For use with Model 2A or 4 AUTOGRAF to plot digital information from perforated paper tape in conjunction with standard tape reader; standard model accepts 1-2-4-8 binary code; other codes available on special order; maximum speed, 60 points per minute; zero offset of 100 to 900 points; plotting scale steps of 10, 20, 50, 100, and 200 points/inch.



Type E-2 Cabinet Stand

A specially designed metal mobile table-top cabinet for use with a Model 2A AUTOGRAF; includes standard rack mounting facilities with two feet of rack space behind door; cable access and receptacle mounting cut-outs provided on side; storage drawer for paper, ink, pens, etc.; ideal for system unitization.

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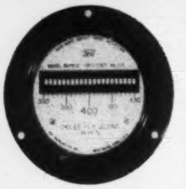
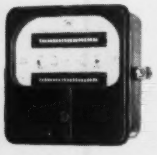
Dual Range, Double Window


Model 36-FX-21
21-Reed Meter in 3½" Case

Model 34-FHXX
9-Reed in 3½" Sealed Case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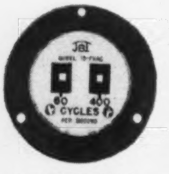

Model 15-FHAC
2-Reed in 1½" Sealed Case

Model 33-FP-9M
Portable, Metal Case
TS-328 A/U (400 cy. type) Shown

VIBRATING REED FREQUENCY METERS

Meters illustrated are typical panel mounting or portable—for use where constant or known frequency is important to efficient operation of equipment.

- *Permanently Accurate* within ±0.3% or better at reference temperature, depending on the model. This accuracy is not affected by poor wave form, external magnetic disturbances, or voltage fluctuations.
- *Size and Type for Every Service.* Made in a wide variety of portable and panel case styles, reed groupings and frequency ranges from 12 to 650 cycles and above; 100-130 volts furnished unless otherwise specified.
- *Rugged Construction* of simplified, patented design, with no moving parts to wear out or get out of calibration. Ideal for field and mobile applications.
- *Suitable for Electronic Circuits* because of relatively low power consumption and J-B-T reeds with high Q and sharp, immediate response.

3½" and 2½" SEALED Types

3½ inch FHXX Meters sealed, glass-to-metal construction with solder terminals, meet or exceed the sealing and electrical requirements of JAN-I-6 and MIL-M-6A including the 3000 volt breakdown, and use the front mounting dimensions specified. Max. barrel diameter, $2\frac{11}{16}$"; $2\frac{7}{8}$" overall depth behind flange. While not regularly stocked, these meters are in volume production. New 2½" meters Model 21-FHXX available on special order.

1½" SEALED Types

Model 15-FHAC (illustrated above). 60 and 400 cycles, 2 reeds, 8-10 volts, for cathode follower circuit. Widely used on audio oscillators to standardize output. Meets intent JAN-I-6, MIL-M-6A and amendments on sealed meters. Barrel, 1½" diameter; detachable flange, 2.094" diameter; solder terminals.

Model 15-FH Series (not illustrated) — Same case, sealed, 5 reeds, 58-62 cycles, 100-130 volts, or 390-410 cycles, 100-130 volts. Variations such as 6 reeds or 25 cycles available on special order.

ASK FOR CATALOG 657

ELAPSED TIME METERS

For Maintenance, Tube Life Data, and Operating Time Records—on Motor Generators, Transmitters, Receivers, Rectifiers, Test Set-ups, etc. *Model 31-EX* (illustrated) also known as running-time or total time meter, registers in $\frac{1}{10}$ hours to 9,999.9 hours, then automatically resets. Normally stocked for 60 cycles, 110-130 volts. 3½" standard meter mounting. Variations such as 50 cycles; 230 volts; 0-99,999 hours; 3" rectangular case; and readings in minutes available on special order.

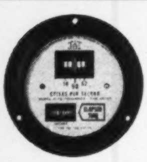
SEALED ELAPSED TIME METERS

Model 31-EHXX—Fully sealed meter, reading 0-9,999.9 hours, same as Model 31-EX above. Glass-to-metal construction, solder terminals, and 3½" detachable flange, all match XX metal frequency meter case. 1000 volt breakdown.

Model 33-EHXX — Operates on 400 cycles, 110-125 volts, to read 0-9,999.9 hours in $\frac{1}{10}$ hour steps. It is presently made only in 3½" flange sealed metal case, 2¾" diameter, 4" deep behind panel. 1000 volt breakdown.

Model 21-EHXX—New. 2½" flange, sealed, full size counter.

FREQUENCY — TIME METERS



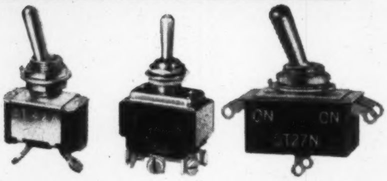
Combination Reed-Type Frequency — Elapsed Time Meters—One Meter Does the Work of Two.

Model 31-FE (illustrated) pioneered by J-B-T, saves panel space and cost, and encourages periodic maintenance; 3¼" flange, metal case, $4\frac{19}{32}$" overall depth, standard. 3½" case known as 31-FEX-1 supplied on custom orders. 5 reeds, 60 cycle range, standard; 7, 9, 11 reeds or 50 cycle range on special order.

DISTRIBUTOR SERVICE

Standard J-B-T items are available through authorized electronics parts distributors.

TOGGLE SWITCHES, AN, JAN, or MIL

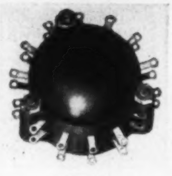


J-B-T now manufactures over 100 models of toggle switches, designed for exceptional reliability, as in JAN-S-23 and Ordnance Standards DDAX. Variations with bushing seal are made at additional cost for MIL-S-6745 specialized AN Air Force requirements. Other types are being planned for pending MIL-S-3950. Improved enclosed designs are supplied on all models—there are no unused holes.

ST40, 42, 52 series—Solid coin silver contacts and rocker arms, unique to J-B-T, add overload protection and keep contact resistance under .005 ohms. Nominal ratings 20 amp at 125 VAC, 10 amp, 250 VAC. See Bulletin TS-4B.

ST12, 13, 16, 17, 22, 23, 26, 27 series—Nominally rated 6 amp at 125 VAC, 3 amp, 250 VAC; threaded bushings $\frac{29}{64}$" or ¼" long. Current carrying parts heavily silver plated. See Bulletin TS-5B.

ROTARY SWITCHES


MOLDED

Shorting and Non-Shorting . . . 14 or 20 Positions . . . 1 to 6 Decks (more on special order) . . . All moving contacts enclosed — eliminates dirt and corrosion . . . sturdy construction with 3-post deck suspension, double-grip collector arms, and rectangular drive shaft through decks for precision indexing . . . test results available covering certain procedures of MIL-E-5272 A . . . interchangeable, electrically and mechanically with J-B-T Series SS-14 and 20 position Laminated Switches. Carrying capacity (not make-and-break): 1 amp.; maximum momentary, normal 5 amp.; maximum voltage between contacts and ground, 1000 volts R.M.S.; between decks and ground, 2000 volts R.M.S. Average contact resistance 0.007 ohms or less. Also available in 6-pole per deck double throw construction. Non-shorting (break before make) and shorting (make before break). Bonded construction is available on special order as MS-14R and MS-20R Types. Provides permanent moisture-proof bond between decks, and strong mechanical support for contacts.

LAMINATED

For dependable performance in quality test equipment, instruments, inspection setups and avionics — two compact types. 14 pos. (2" dia.) or 20 pos. ($2\frac{23}{32}$" dia.) one to six decks. Model SS-14-2 shown.

LEVER ACTION SWITCHES

Model MS-20-1L5A-1 (illustrated) provides 5 live positions, 2 circuits per deck in molded body. Mounting to Print SK-64. Single deck types use same top quality parts as laminated SS-14 switches. For ganged lever series, SSG types, in 3, 4, or 5 positions, 2-10 decks. See Print SK-74.

ASK FOR CATALOG 657

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Air-Marine Motors, Inc., 369 Bayview Ave., Amityville, L. I., N. Y.
Sub-fractional horsepower motors, fans, and blowers

Air-Maze Corp., 25000 Miles Road, Cleveland 28, Ohio
Filters for air and liquid;

Air-O-Tronics, Box 31, Lancaster, Calif.
Electrical and electronic instruments and components; adapters and hardware

Air Reduction Sales Co., 60 E. 42 St., New York 17, N. Y.

Airborne Accessories Corp., 1414 Chestnut St., Hillside 5, N. Y.
Power units; aircraft control units; radio noise filters; airborne actuators

Airborne Instruments Laboratory, Inc., 160 Old Country Rd., Mineola, L. I., N. Y.
Polar and rectangular coordinate recorders, electronic instruments

Airbourne Instruments Laboratory, Inc., Modac Div., 864 Franklin Ave., Thornwood, N. Y.
Special purpose digital computer systems and component parts (magnetic drums, magnetic tape input-output units etc.)

Aircraft Armaments, Inc., Industry Lane, Cockeysville, Md.
Land, sea and air armament systems; electronic, electro-mechanical, electro-explosive and mechanical components, including supports and test equipment

Aircraft Electronics Associates, Inc., 94 Silas Deane Highway, Rocky Hill, Conn.
Aircraft instruments and testers

Aircraft Products Div., Manning, Maxwell & Moore, Inc., Danbury, Conn.

Aircraft Radio Corp., Boonton, N. J.
Aircraft and navigation instruments

Aircraft Transformer Corp., Willow & West Sts., Long Branch, N. J.
Pulse and high-frequency transformers

Airdesign Incorporated, 241 Fairchild Ave., Upper Darby, Pa.
Audio-frequency equipment; transformers

Airdraulics Engineering, Inc., Overhill Ave., Rye, N. Y.
Torque testers

AiResearch Mfg. Co., 9851 Sepulveda Blvd., Los Angeles 45, Calif.
Aircraft components, accessories and complete systems

Airflo Instrument Co., 53 Addison Rd., Glastonbury, Conn.
Special probes for measuring gas velocity, direction, temperature and pressure

Airflyte Electronics Co., 535 Ave. A, P.O. Box 207, Bayonne, N. J.
Collector ring assemblies; brush block assemblies; coded commutators

Airmatic Valve, Inc., 7317 Associate Ave., Cleveland 9, Ohio
Control valves and operating devices; hydraulic boosters

Airpath Instrument Co., Lambert Field, St. Louis 21, Mo.
Magnetic instruments; compasses

Airpax Products Co., Middle River, Baltimore 20, Md.
Power supplies; electrical and electronic components

Airplane & Marine Instruments Co., 15 William St., New York 5, N. Y.
Absolute pressure gages

Airtron, Inc., 1101 Elizabeth Ave., Linden, N. J.

Alabama Automation Corp., 12th Floor, Times Bldg., Hurlsville, Alabama
Curve followers; multiple channel input function generators; process control systems

Albany Products Co., Inc., Connecticut Ave., South Norwalk, Conn.
Distributors of stainless steel fasteners, screws, bolts, set-screws and rivets

Alco Mfg. Co., 4011 Cuming St., Omaha 3, Neb.
Radioactivity instrumentation

Alco Valve Co., 865 Kingsland Ave., St. Louis 5, Mo.
Automatic controllers; control valves; pressure regulators

Alconox, Inc., 853 Broadway, New York 3, N. Y.
Detergents

Alcor Electronics Corp., 180 Lafayette St., New York 13, N. Y.
Encapsulated circuits

Alden Electronic & Impulse Recording Equipment Co., Alden Research Center, P. O. Box 125, Westboro, Mass.
Electrosensitive paper; recorders; components

Alden Products Co., 117 N. Main St., Brockton 64, Mass.
Mechanical components to mount, house, fasten, connect, and monitor electronic circuitry
(See advertisement on pages 71, 80)

Alden Systems Co., Washington St., Westboro, Mass.
Cabinets; racks; panels; lighting equipment; laboratory and work benches

Alfa American Corp., 308 W. 42 St., New York 36, N. Y.
Optical filters; production equipment; test instruments

Alfab Manufacturing Co., 8320 Millet St., Houston 12, Texas
Laboratory furniture

Alfax Paper & Engrg. Co., Washington St., Westboro, Mass.
Electrosensitive recording paper
(See advertisement on page 24)

Alfred Electronics, 897 Commercial St., Palo Alto, Calif.
Traveling-wave-tube amplifiers; precision regulated high-voltage power supplies; pulse generators; vacuum pump controls

Align-A-Scope, Inc., 2123 Stoner Ave., W. Los Angeles 25, Calif.
Optical tooling instruments

Alina Corp., 401 Broadway, New York 13, N. Y.
Clocks; differential pressure gages; time meters and switches; toolmakers' microscopes

All American Tool & Mfg. Co., 8027 Lawndale, Skokie, Ill.
Vibration fatigue testers

All-State Welding Alloys Co., Inc., 249-55 Ferris Ave., White Plains, N. Y.
Brazing, soldering and welding rods; fluxes

All Weather Springs, 56 Main St., Millburn, N. J.

Allard Instrument Corp., 146 E. 2nd St., Mineola, L. I., N. Y.
Aircraft instruments; power units; motors; switches; components

Allegany Instrument Co., 1091 Wills Mountain, Cumberland, Md.
Pressure recorders; amplifiers; cathode ray recorders; reflectometers; portable potentiometers
(See advertisement on page 17)

Allegheny Plastics, Inc., Route #51 & Thorn Run Rd., Coraopolis, Pa.
Printed and laminated plastic dials, nameplates, etc.

Allegheny Ludlum Steel Corp., 2020 Oliver Bldg., Pittsburgh 22, Pa.
Stainless, tool and electrical steels, and alloys

Allen, Chas. I., Pequabuck, Conn.
Allen Co., Inc., L. B., 6710 Bryn Mawr Ave., Chicago 31, Ill.

Allen Co., A. K., 57 Meserole Ave., Brooklyn 22, N. Y.
Cylinders; valves; rotary dial feed tables

Allen Mfg. Co., 133 Sheldon St., Hartford 2, Conn.
Hex-socket cap and set screws

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wisc.
Motor control; electronic components.

Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio
Fractional-hp motors

Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.

Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
Relays; switches; remote control equipment

Allied Engineering Div., Ferro Corp., 4150 East 56th St., Cleveland, Ohio

Allied Engraving & Stamping Co., 17-21 Elm St., Buffalo 3, N. Y.
Precision stamped and/or engraved products

Allied Products Div., Hamilton Watch Co., 940 Wheatland Ave., Lancaster, Pa.

Allied Radio Corp., 100 N. Western Ave., Chicago, 80, Ill.
Distributors of electronic tubes, parts and equipment; P. A. amplifiers, high-fidelity wired amplifiers and tuners; electronics kits.

Allis-Chalmers Mfg. Co., P. O. Box 512, Milwaukee 1, Wisc.
Position indicators; frequency load and phase regulators
Allison Labs., 14185 Skyline Drive, LaPuenta, Calif.

Alloy Bellows Engineering Co., 18125 Roseland Rd., Cleveland 12, Ohio
Bellows, pressure and vacuum controllers
All-Tronics, Inc., 45 Bond St., Westbury, L. I., N. Y.
Special electromechanical systems, networks, test equipment; R. F. filters.

Almo Mfg. Co., 113-119 Sussex Ave., Newark 3, N. J.
Mercury switches; vacuum and gas-filled lamps
Standard and custom-built glass enclosed mercury switches.

Alpha Corp., 65 Harvard Ave., Stamford, Conn.
Instrument lubricating oils and oil testers

Alpha Metals, Inc., 56 Water St., Jersey City 4, N. J.
Solder, tin, and lead specialties; fluxes, high purity metals; fabrication of non-ferrous metals

Alpha Molkote Corp., 65 Harvard Ave., Stanford, Conn.
Lubricants.

Alpine Laboratories Limited, 1610 S. Nevada Ave., Colorado Springs, Colo.
Radiation Detection Instruments & Ultra-Violet Light Sources

Altec Lansing Corp., 1515 South Manchester Ave., Anaheim, Calif.
Audio equipment

Alteneder & Sons, Theo., 1217 Spring Garden St., Philadelphia 23, Pa.
Drawing instruments
(See advertisement on page 191)

Alto Scientific Co., 855 Commercial St., Palo Alto, Calif.
Electrical test instruments

Aluminum Co. of America, 1123 Alcoa Bldg., Pgh. 19, Pa.
Flux; forgings; magnesium; powered metal; aluminum foil; hard solders; aluminum wire.

Alwac Corp., 13040 Cerise St., Hawthorne, Calif.

Amelco, Inc., 2040 Colorado Ave., Santa Monica, Calif.
Electronic research and development; electronic assembly fabrication; electronic test equipment; defense industry major sub-contractors

Amerac Incorporated, 116 Topsfield Rd., Wenham, Mass.
Electrical and electronic instruments

American Balance Corp., 48 Potter Ave., New Rochelle, N. Y.
Balances, scales and weights

American Brass Co., Waterbury 20, Conn.

American British Electric Corp., 57 Park Ave., New York 16, N. Y.
Voltage-dividing resistors

American Chain & Cable Co., Inc., Automotive & Aircraft Div., 601 Stephenson Bldg., Detroit, Mich.
Flexible control cable
(See advertisement on page 169)

American Chain & Cable Co., Inc., Wilkes-Barre, Pa.

American Chain & Cable Co., Helicoid Gage Div., 929 Connecticut Ave., Bridgeport 2, Conn.
Bourdon tube gages and pressure indicators

American Condenser Co., 4410 N. Ravenwood Ave., Chicago 40, Ill.
Capacitors

American Cystoscope Makers, Inc., 1241 Lafayette Ave., New York 59, N. Y.
Bore and internal surface inspection devices

American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif.

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
Electronic instruments

American Electronic Labs., Inc., 121 North Seventh St., Philadelphia 6, Pa.
Electrical and electronic instruments; photoelectric instruments; antenna design; radar test equipment

American Electronics, Inc., 655 W. Washington Blvd., Los Angeles 15, Calif.
Ac-dc miniature motors and blowers; motor alternators, induction couplings; servo components; magnetic recorders; nuclear instruments

American Elite, Inc., 29 East 32nd St., New York 16, N. Y.
Antennas; connectors; cathode-ray and electron tubes; electronic components

American Emblem Co., Inc., P. O. Box 116, Utica 1, N. Y.
Dies and tools; contract manufacturers of badges, emblems, names plates, and escutcheons

American Felt Co., Glenville, Conn.

American Forest Products Co., 30 & Thompson Sts., Philadelphia 21, Pa.

American Gage & Machine, see Simpson Electric Div.

American Gas & Chemicals, Inc., 120 E. End Ave., New York 28, N. Y.
Leak detecting liquid

American Gas Accumulator Co., see A'G'A' Div. Elastic Stop Nut Corp.

American Gas Furnace Co., 988 Lafayette St., Elizabeth 4, N. J.
Gas fired furnaces and burners

American Hard Rubber Co., 93 Worth St., New York 13, N. Y.

American Hydromath Corp., 25-20 43rd Ave., Long Island City 1, N. Y.
Nautical instruments; quality control instruments; slide rules

American Indicator-Paper Co., 4611 N. Kostner Ave., Chicago 30, Ill.
Chemical indicator papers

American Industrial Instrument Co., 46 Florence St., Springfield 5, Mass.
Automatic assembly machines (custom)

American Instrument Co., 8010-8020 Georgia Ave., Silver Spring, Md.
Scientific instruments and materials testing apparatus

American Kloeckner-Moeller Corp., 4113 E. 11th St., Tulsa 12, Okla.
Electric motor controls, contactors, relays, motor starters; control cabinets; pilot devices; drum switches and limit switches

American Laubscher Corp., 250 West 57th St., Fisk Bldg., New York 19, N. Y.
Screw machine products; instrument jewels; hairsprings; centerless ground and polished products; stampings and dies; pinions; gears; wheels; dials; panels; scales
(See advertisement on page 193)

American Lava Corp., Cherokee Blvd. & Manufacturers Rd., Chattanooga 5, Tenn.

American Lens Co., 45 Lispenard St., New York, N. Y.
Cathode-ray tubes and lenses

American Machine & Foundry Co., 1101 N. Royal St., Alexandria, Va.
Electronic and electromechanical equipment; automatic machinery; electric power generation instruments

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston, Mass.
Electrical and electronic instruments and components; medical and biological instruments

American Machine & Metals Inc.
(See U. S. Gauge)

American Measuring Instruments Corp., 21-25 4th Ave., Long Island City 1, N. Y.
Precision measuring instruments

American Mercantile Co., Inc., 33 W. 42nd St., New York 18, N. Y.

American Meter Co., 920 Payne Ave., Erie 6, Pa.
Gas meters; regulators; control equipment for gas and oil industries

American Metrix Corp., 40 Hadden Ave., Camden 3, N. J.

American Name Plate & Mfg. Co., see Anco Instr. Div.

American Optical Co., Instrument Div., Box A, Buffalo 15, N. Y. (Projectors Div., 80 Heard St., Chelsea, Mass.)
Scientific optical instruments; projection apparatus; testing equipment; microscopes, microtomes, refractometers, spectrometers, visual colorimeters, illuminators, delineascopes, magnifiers; special lenses, prisms and mirrors.

American Paulin System, 1524 So. Flower St., Los Angeles 15, Calif.
Meterological instruments; altimeters; barometers
(See advertisement on page 60)

American Perfit Crystal Corp., 653 Eleventh Ave., New York 36, N. Y.

American Photocopy Equipment Co., 1920 W. Peterson Ave., Chicago 26, Ill.
Photocopy equipment

American Platinum Works, 231 N. J. Railroad Ave., Newark, N. J.

American Recording Chart Co., 3113 E. 11th St., Los Angeles 23, Calif.

American Research Corp., Farmington, Conn.
Testers for environment conditions, product properties, etc; instrument calibrating
(See advertisement on page 98)

American Super-Temp Wires Inc., West Canal St., Winooski, Vt.
(See advertisement on page 251)

American Resin Corp., 3215 N. Sheffield Ave., Chicago 13, Ill.

American Silver Co., 36-07 Prince St., Flushing 54, N. Y.
Silver solders; solder flushed metals

American Television & Radio Co., 300 E. Fourth St., St. Paul 1, Minn.

American Temperature Indicating Co., 1017 Summit St., Toledo 4, Ohio
Electrical resistance thermometers

American Thermo-Electric Co., 7269 Santa Monica Blvd., Los Angeles 46, Calif.
Vacuum, separate-heater, and contact type thermocouples
(See advertisement on page 218)

American-Thermo Ware Co., 12-16 Warren St., New York 7, N. Y.

American Time Products, Inc., 580 Fifth Ave., New York 36, N. Y.
Timing systems; frequency standards
(See advertisement on page 8)

American Tradair Corp, 34-01 30 St., Long Island City 6, N. Y.
Electronic instruments and components; radioactivity counters, shields, etc.

Amerline, 2727 W. Chicago Ave., Chicago 22, Ill.
Radio tube testers; spark plug testers

Amersil Co., Inc., 685 Ramsey Ave., Hillside 5, N. J.
Fused silica and quartz products

Ames Co., B. C., 131 Lexington St., Waltham, Mass.
Comparator and dial gages; length measuring devices

Ames Precision Machine Works, 131 Lexington St., Waltham 54, Mass.
Instrument lathes; hardness testers

Amglo Corp., 4325-33 Ravenswood, Chicago 13, Ill.
Gas discharge tubes for signals, controls, stroboscopic and photographic uses; dc timer motors and timers; electronic flash units; special electron tubes
(See advertisement on page 144)

Ampco Mfg. Co., 9 River St., Morristown, N. J.

Amperex Electronic Corp., 230 Duffy Ave., Hicksville, L. I., N. Y.
Electron tubes; X-ray tubes

Amperite Co., Inc., 561 Broadway, New York 12, N.Y.
Delay relays; ballast regulators

Ampex Corp., 934 Charter St., Redwood City, Calif.
Magnetic tape recorders

Amphenol Electronics Corp., 1830 S. 54th Ave., Chicago 50, Ill.
Electrical rack and panel connectors; Teflon and polyethylene Coaxial cable plugs and sockets; cable and wire assemblies
(See advertisement on page 12)

Amplifier Corp. of America, 398 Broadway, New York 13, N. Y.
Amplifiers; magnetic tape recorders

Amplitronix, Inc., 155 W. 72 St., New York 23, N. Y.

Amthor Testing Instrument Co., Inc., 48 Van Sinderen Ave., Brooklyn 7, N. Y.
Physical testing machines; speed indicators; indicating, recording, hand tachometers; thickness gages; mercury columns; scales: paper, cordage, foil
(See advertisement on page 171)

Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

Analogue Controls, Inc., 39 Roselle St., Mineola, L. I., N. Y.
Precision potentiometers

Analysis Sales Co., 1827 Union Commerce Bldg., Cleveland 14, Ohio
Impact recorders

Analytical Measurements, Inc., 585 Main St., Catham, N. J.
pH probes and meters

Anatran Engineering Corp., 165 E. California, Pasadena 2, Calif.
Electrical and electronic components

Anco Instr. Div., Amer. Name Plate & Mfg. Co., 4254 W. Arthington St., Chicago 24, Ill.
Electronic instruments; industrial stethoscopes

Anders Lykens Corp., Lykens, Pa.
Instrument air dryers

Andersen Laboratories, Inc., 39 Talcott Rd., W. Hartford 10, Conn.
Fixed and variable solid delay lines

Anderson, Arthur R., 110 Woodbury Ave., Springdale (Stamford), Conn.
Strain gages

Anderson Machine Shops, Inc., Brook Rd., Needham Heights 94, Mass.
Testing machines; yarn testers; computers

Anderson Co., V. D., 1935 W. 96th St., Cleveland 2, Ohio
Air cleaners, scrubbers and strainers. steam traps

Anderson & Sons, Inc., Westfield, Mass.

Andrew Technical Supply Co., 6972 N. Clark St., Chicago 26, Ill.
Laboratory apparatus

ANelex Corp., 150 Causeway St., Boston 14, Mass.
High-speed data printing systems

Anemostat Corp. of America, 10 E. 39th St., New York 16, N. Y.
Airspeed indicators; thermometers; static pressure indicators

Anetsberger Bros., Inc., Northbrook, Ill.
Temperature and humidity test chambers

Ann Arbor Instrument Works, 725 Packard St., Ann Arbor, Mich.
Testing machines

Ann Arbor Optical Co., P. O. Box 2056, Ann Arbor, Mich.
Optical test instruments

Annin Company, 6570 E. Telegraph Rd., Los Angeles 22, Calif.
Control valves
(See advertisement on page 13)

Annis Company, R. B., 1101 N. Delaware St., Indianapolis 2, Ind.
Precision dynamic and single plane balancing machines; magnetizing and demagnetizing equipment; split core current transformers

Anti-Corrosive Metal Products Co., Inc., S. River St., Castleton-on-Hudson, N. Y.
Stainless steel and nylon fastenings

Anton Electronic Labs., Inc., 1226 Flushing Ave., Brooklyn 37, N. Y.
Electrical, electronic and nucleonic instruments; electron tubes; components

Apex Scientific Co., 59 Donna Maria Way, Orinda, Calif.

Apex Specialties Co., 1115 Douglas Ave., Providence 4, R. I.
Magnifiers; lens fitting heaters and cones

Applied Physics Corp., 362 W. Colorado St., Pasadena 1, Calif.
Cary recording quartz spectrophotometers; vibrating reed electrometers

Applied Research Labs., P. O. Box 1710, Glendale 5, Calif.
Spectrochemical equipment, including grating spectrographs; optical emission quantometers; X-ray fluorescence spectrometers and quantometers; source units; microphotometers; related accessories
(See advertisement on page 198)

Applied Science Corp. of Princeton, P. O. Box 44, Princeton, N. J.
Research and development in electronics and physics
(See advertisement on page 206)

Arachne Laboratory, P. O. Box 1606, Huntington, W. Va.
Laboratory supply house

Aremac Associates, 50 So. San Gabriel Blvd., Pasadena 10, Calif.
Optical instrumentation; cameras

Arenburg Ultrasonic Lab., 94 Green St., Jamaica Plain 30, Boston, Mass.

Arens Controls, Inc., 2017 Greenleaf St., Evanston, Ill.
Remote control systems

A.R.F. Products Inc., 7627 Lake St., River Forest, Ill.
Electrical instrumentation, remote control equipment

Arga Div., see Helipot

Aristo Grid Lamp Products, Inc., 65 Harbor Rd., Port Washington, L. I., N. Y.
Visible spectrum and ultraviolet lamps
(See advertisment on page 127)

Aristo Import Co., Inc., 630 Fifth Ave., New York 20, N. Y.
Stop watches

Arizona Tool & Die Co., 31 E. Rillito St., Tucson, Ariz.
Gages; micrometers; optical comparators; shop equipment

Ark Engineering Co., 431 W. Tabor Rd., Philadelphia 20, Pa.
Electrical measuring and testing equipment

Arlin Products, Inc., 13541 Auburn Ave., Detroit 23, Mich.
Electronic inspection equipment; gage heads; micrometers; automatic control systems

Arlington Aluminum Co., 19011 W. Davison Ave., Detroit 23, Mich.
Racks and supports for tubes and cables

Arma Div., Am. Bosch Arma Corp., Roosevelt Field, Garden City, N. Y.
Servomechanisms; computers; gyroscopes; navigation, guidance and fire control systems

Armco Steel Corp., Middletown, Ohio

Armel Electronics, Inc., 840 Fifth Ave., Brooklyn 3., N. Y.
Terminals; terminal strips, blocks; sockets; connectors; related components

Armour & Co., Curled Hair Dept. & Coated Abrasives Div., North Benton Rd., Alliance, Ohio
Packaging materials; sand paper

Armstrong Bros. Tool Co., 5200 Armstrong Ave., Chicago 30, Ill.

Arnhold Ceramics, Inc., 1 East 57th St., New York 22, N. Y.
Electrical and electronic components

Arnold Engineering Co., P. O. Box G, Marengo, Ill.
Permanent magnets

Arnold Magnetics Co., 4613-15 W. Jefferson Blvd., Los Angeles 16, Calif.
Magnetic amplifiers; Hi-Q filters; toroidal coil winding equipment

Arnoux Corp., 11924 W. Washington Blvd., Los Angeles 66, Calif.
Developement and manufacture of airborne and industrial instrumentation equipment including: temperature and pressure control systems; magnetic amplifiers; temperature transducers

Aronson Machine Co., Arcade, N. Y.

Arrow-Hart & Hegeman Electric Co., 103 Hawthorne St., Hartford 6, Conn.
Magnetic, mercury & relay switches

Art Wire & Stamping Co., 227 High St., Newark 2, N. J.
Precision wire forms

Artisan Metal Works Co., 11400 Madison Ave., Cleveland 2, Ohio
Instrument chassis, racks and cabinets

Asam Mfg. Co., 1629 W. Fort St., Detroit 16, Mich.

Asch Equipment Co., 642 Keowee St., Dayton 4, Ohio
Force measuring equipment

Ashland Electric Products Co., 32-02 Queens Blvd., Long Island City 1, N. Y.
Special electric motors

Ashton Valve Company, 43 Kendrick St., Wrentham, Mass.
Pop safety & relief valves; pressure gages; gage testers and master-pilot and master pressure gages

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
Automatic control instruments

Askania-Werke, A. G., 4913 Cordell Ave., Bethesda, Md.

Assembly Products, Inc., Wilson Mills Rd., Chesterland 11, Ohio
Electrical and electronic instruments; and accessories
(See advertisement on pages 182, 186, 214)

Associated Research, Inc., 3758 W. Belmont Ave., Chicago 18, Ill.
Vibrotest insulation testing equipment. Special measuring and testing instruments of electrical nature.

Associated Testing Labs., Inc., Mfg. Div., 417 Clinton Rd., Caldwell, N. J.
Environmental testing; test chambers and machines

Associated Specialties Co., 1751 Main St., Orefield, Pa.
Electronically regulated constant voltage and constant-current power supplies
(See advertisement on page 162)

Associated Spring Corp., Bristol, Conn.
Springs, clips, fasteners
(See advertisement on page 201)

Associated Valve & Engr. Co., 1150 W. Marquette Road, Chicago 21, Ill.
Automatic controllers; control valves; components

Astron Corp., 255 Grant Ave., E. Newark, N. J.
Capacitors

Atchley, Inc., Raymond, 2340 Sawtelle Blvd., Los Angeles 64, Calif.
Electro-hydraulic control systems; hydraulic servo-valves; torque motors; transistorized electronic servo-amplifiers; dc electronic power supplies

Atkomatic Valve Co., Inc., 545 W. Abbott St., Indianapolis 25, Ind.
Two-way Solenoid valves

Atlantic India Rubber Works, Inc., 571 W. Polk St., Chicago 7, Ill.

Atlantic Research Corp., 812 Fairfax St., Alexandria, Va.
Pressure, vibration, and acoustic pickups

Atlantic Transformer Div., New London Instrument Co., Inc., 30 Hynes Ave., Groton, Conn.

Atlas E-E Corporation, 47 Prospect St., Woburn, Mass.
Electronic component clips

Atlas Electric Devices Co., 4114 N. Ravenswood Ave., Chicago 13, Ill.
Machines to determine a material's resistance to the action of sunlight, sunlight and rain, and laundering

Atlas Engineering Co., 176 Blue Hill Ave., Roxbury, Mass.
Power supplies; amplifiers; electronic components

Atlas Exploration Co., 1911 W. Alabama St., Houston 6, Texas
Geophysical instruments
Atlas Precision Products Co., Philadelphia 24, Pa.

Atlas Valve Co., 282 South St., Newark 5, N. J.
Regulator valves

Atmosphere Control Co., Inc., 5315 Chester Ave., Philadelphia 43, Pa.
Testing instruments and machines; gas anlyzers

Atomic Instrument Co., see Baird Associates-Atomic Instrument Co.

Atwood & Morrill Co., Salem, Mass.
Automatic control systems; control valves

Auburn Button Works, Inc., 1930 Canova Ave., Auburn, N. Y.

Auburn Mfg. Co., 10 Stack St., Middletown, Conn.
Gaskets; washers; packings

Audio Development Co., Transformer Div. 2833 13th Ave., S., Minneapolis 7, Minn.
Transformers; audio frequency equipment

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
Audio-frequency equipment

Austin Company, Special Devices Div., 76 Ninth Ave., New York 11, N. Y.
Beta-gamma hand and foot checkers; computers and components; electrical and electronic; measuring instruments and automatic-control systems; components

Auth Electrical Specialty Co., Inc., 422 E. 53 St., New York 22, N. Y.
Signaling devices

Auto Engraver Co., Ridgefield, Conn.
Contour and 3-dimensional milling machines

Auto Control Laboratories, 5665 Selmarine Dr., Culver City, Calif.
Hydraulic servo-valves; hydraulic and pneumatic test equipment.

Autocall Co., Shelby, Ohio
Electrical signaling, control & metering devices

Autoclave Engineers, Inc., 2930 W. 22nd St., Erie, Pa.
High pressure autoclaves, valves and thermocouples

Automatic & Precision Mfg. Co., 252 Hawthorne Ave., Yonkers 5, N. Y.
High-pressure seals for switches and shafts; high-pressure, self-sealing screws

Automatic Control Co., 995 University Ave., St. Paul 4, Minn.

Circuit switches for automatic level controls; automatic timing and sequence controllers

Automatic Controls Corp., 2390 Winewood, Ann Arbor, Mich.

Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
Relays; rotary stepping switches, and other control components; P-A-X business telephone systems
(See advertisement on page 36)

Automatic Methods, Inc., 965 W. Grand St., Elizabeth, N. J.
(See advertisement on page 128)

Automatic Scale Co., Inc. 180 Lafayette St., New York 14, N. Y.
Automatic Scales

Automatic Steam Products Corp., 140 W. 31st St., New York, N. Y.
Water demineralizers; steam generators

Automatic Switch Co., Hanover Rd., Florham Park, N. J.
Solenoid valves and automatic electric control apparatus

Automatic Timing & Controls, Inc., King of Prussia, Penna.
Timers, time control and specialty engineering; valves and valve controllers; relays.
(See advertisement on pages 194, 205, 225)

Automatic Valve Controller Co., Box 268, Tulsa 1, Okla.
Automatic valve control

Automation Corp. of America, 5546 Satsuma Ave., North Hollywood, Calif.
General purpose control systems for automatic operation of machine tools; magnetic recording equipment

Automation Equipment, Inc., 428 S. Cherry St., Wallingford, Conn.

Automation Products, Inc., 3030 Maxroy St., Houston, 24, Texas
Electrical and electronic controls; electrical and pneumatic operated valves

Autonetics Div., North American Aviation, Inc., 9150 E. Imeprial Hwy. P.O. Box AN, Bellflower, Calif.

Autoscrew Co., 216 W. 18th St., New York 11, N. Y.
Instrument Screws

Autotron Co., Danville, Ill.
Automatic inspection devices

Autron Engineering, Inc., 1254 W. 6th St., Los Angeles 17, Calif.
Control devices
(See advertisement on page 86)

Aviation Engineering Corp., 34-56 58th St., Woodside, N. Y.
Industrial measuring and automatic-control devices; remote-control systems; testers; electrical and electronic instruments and components; regulators; computer components

Avien, Inc., 58-15 Northern Blvd., Woodside, L. I., N. Y.
Aircraft instruments; systems and system components for fuel gaging and fuel management, engine temperature and fuel flow instrumentation.

Avion Div., ACF Industries, Inc., 11 Park Place Paramus, N. J.
Electrical and mechanical measuring instruments and automatic control systems

Avionic Products Engr. Corp., Route No. 46, Dover, N. J.
Aircraft measuring and automatic control instrumentation

Avionic Supply, 1223 Venice Blvd., Los Angeles 6, Calif.
Distributors of new and used instruments and control equipment

Axel Brothers, Inc., 134-20 Jamaica Ave., Jamaica, N. Y.

Axler Associates, Inc., 102-42 43rd Ave., Corona 68, N. Y.

B

B & F Instruments, Inc., 4732 N. Broad St., Philadelphia 41, Pa.
Torque and acceleration measuring equipment; bridge-balance and calibrating units

B & H Instrument Co., Inc., 3479 W. Vickery Blvd., Fort Worth 7, Texas
Jet engine thermocouple system testers; thermal switch testers; tachometers; frequency systems testers.

B-I-F Industries, Inc., 345 Harris Ave., Providence 1, R. I.
Equipment for control and processing of solids, liquids and gases

B J Electronics, Borg-Warner Corp., 3300 Newport Blvd., P. O. Box 1679, Santa Ana, Calif.
Environmental testing, digital systems & components, RF test equipment.

B & K Manufacturing Co., 3726 N. Southport Ave., Chicago 13, Ill.

Test equipment calibrators; video pattern and picture generators; shorted turns indicators; electron tube testers; CRT testers; and rejuvenators

B/W Controller Corp., 2200 E. Maple Rd., Birmingham, Mich.
Floatless liquid level controls
(See advertisement on page 126)

Babcock Relays, Inc., 14743 Lull St., P. O. Box 3062, Van Nuys, Calif.
Subminiature, sensitive, and polarized relays

Bacharach Industrial Instrument Co., 7301 Penn Ave., Pittsburgh 8, Pa.
Portable CO_2 and oxygen indicators; CO detectors; portable indicating and recording thermometers; relative humidity indicators; smoke testers; air filter gages; electrical operation recorders
(See advertisement on page 212)

Bache & Company, Semon, Greenwich & Morton Sts., New York 14, N. Y.
Mirrors, plate glass, sheet glass, satin ground glass, glass specialties, gage glass tube, optical parts
(See advertisement on page 114)

Bachmann Co., Inc., Eric R., 27-11 41st Ave., Long Island City 1, N. Y.
Metalworking machine tools & precision tools

Bacon Industries, Inc., 192 Pleasant St., Watertown 72, Mass.
Silicone rubber; specialty elastomers; potting compounds; adhesives; hermetic sealing

Badger Meter Mfg. Co., 2371 N. 30th St., Milwaukee 45, Wis.
Liquid meters

Bailey Meter Co., 1041 Ivanhoe Rd., Cleveland 10, Ohio
Electrical, mechanical, and pneumatic equipment for indicating, recording, and controlling such factors as: combustion, flow, liquid level, temperature and pressure; Data Handling Equipment; Information Systems
(See advertisement on pages 61, 62, 66, 75, 81, 82, 94, 104, 105, 107, 110, 154, 174, 176, 180, 182, 184, 196, 220)

Baird-Atomic, Inc. 33 University Rd., Cambridge 38, Mass.
Optical, mechanical and electronic equipment for spectrochemical analysis; radioactivity instrumentation; electronic counting and control devices
(See advertisement on page 86)

Bakelite Div., Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Baker Co., 106 Granite St., Bideford, Maine
Testers, cleaners and tooling for ball bearings and small parts

Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
Thermocouple wire; microchemical apparatus; rupture disks; precious metals

Baker Compass Co., Melrose, Mass.
Compasses

Balco Research Labs., 49-53 Edison Place, Newark 2, N. J.
Capacitors; radio noise filters

Baldwin-Lima-Hamilton Corp., Electronics and Instrumentation Div., Waltham 54, Mass.
Physical testing machines; strain gages; transducers

Balfor Industries, Inc., 1815 Webster Ave., Bronx 57, N. Y.

Ballantine Labs., Inc., Boonton, N. J.
Precision electronic voltmeters and accessories
(See advertisement on page 247)

Ballastran Corp., 1701 N. Calhoun St., Fort Wayne 7, Ind.
Instrument and power transformers

Balloffet-Vianney Wire Die Co., Inc., 6825 Adams St., Guttenburg, N. J.
Dies, diamond.

Baltic Metal Products Co., 122 Sutton St., Brooklyn 22, N. Y.
Custom built panels, rack and console housing

Baltimore Biological Laboratory, Inc., 1640 Gorsuch Ave., Baltimore, 18, Md.
Laboratory filling machines, pumps, etc.

Baltimore Instrument Co., 716 West Redwood, Baltimore, Md.
Mechanical and optical instruments

Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
X-ray equipment

Barber-Colman Co., 1300 Rock St., Rockford, Ill.
Automatic controlling instruments for temperature, humidity, pressure liquid level, moisture regain; motor-operated valves; solenoid valves; electric power units; damper controllers, voltage-sensitive relays; associated switches and relays, fractional-hp motors; geared motor units; and hardness testers

Barber-Colman Co., Aircraft & Small Motors, 1300 Rock St., Rockford, Ill.

Barber Laboratories, Alfred W., 34-04 Francis Lewis Blvd., Flushing, L. I., N. Y.
Voltmeters

Barbour Stockwell Co., 205 Broadway, Cambridge 39, Mass.
Tachometers; adapters; miniature speed reducers; miniature clutches; gear boxes; flexible shafts

Barclay Instrument Div., Patent Button Co., Waterbury 20, Conn.
Polargraphic equipment; flame photometers

Barden Corp., E. Franklin St., Danbury, Conn.
Precision ball bearings.

Barksdale Valves, 5125 Alcoa Ave., Los Angeles 58, Calif.
Control valves; valve operating devices; pressure regulators, auxiliaries

Barnes Development Co., 213 W. Baltimore Pike, Lansdowne, Pa.
Electrical instruments; automatic inspection devices; motion picture cameras

Barnes Engineering Co., 30 Commerce Rd., Stamford, Conn.
Automatic assembly machines; programmed machine tool controls; infrared instruments and systems

Barnes Co., W. F. & John, 301 S. Water St., Rockford, Ill.
Automatic control equipment

Barnstead Still and Sterilizer Co., 2 Lansville Terrance, Boston 31, Mass.
Water stills

Barron, Alexander F., 53 W. Jackson Blvd., Chicago 4, Ill.
Engine controllers; constant-rate battery chargers

Bartelt Engineering Co., 1214 Patridge Ave., Beloit, Wis.
Pedestal micrometers

Barrows Porcelain Co., Langdon Farm & Penn R. R., Cincinnati 13, Ohio
Steel, glass-coated (plated) pyrometer tubes

Barry Controls, Inc., 700 Pleasant St., Watertown 72, Mass.
Vibration mountings and isolators

Barton Instrument Corp., 580 Monterey Pass Rd., Monterey Park, Calif.
Indicators; recorders; flow switches; transmitters; controllers; integrators.
(See advertisement on page 104)

Basic Controls, Inc., 1714 Westwood Blvd., Los Angeles 24, Calif.
A-C and d-c amplifiers; photo-electric controls; sensing heads for detecting radiation

Basler Electric Co., 601 Fifth St., Highland, Ill.
Transformers; inductors; chokes

Baso Inc., P. O. 461, Milwaukee 1, Wisc.

Bastian Bros. Co., 1700 N. Clinton Ave., Rochester 1, N. Y.

Bastion-Blessing Co., 4201 W. Peterson St., Chicago 30, Ill.
Control equipment for high pressure gases

Bausch & Lomb Optical Co., Inst. Div. 738 St. Paul St., Rochester 2, N. Y.
Optical instruments for industrial, scientific and educational use including microscopes, colorimeters, refractometers, photomicrographic and metallographic equipment, contour measuring projector, optical glass and special, optical systems

Bayley Instrument Co., P. O. Box 538, Danville, Calif.
Precision temperature controllers; constant temperature baths; flowmeters

Bayside Watch Tool Co., 20-02 Utopia Pkwy. Whitestone 57, N. Y.
Machines, tools and dies for watch, clock and instrument industries

Beacon Gage Co., 11 River St., Wellesley, Mass.
Pressure gages

Bead Chain Manufacturing Co., 93 Mount Grove St., Bridgeport 5, Conn.
Contact pins, terminals, jacks and sleeves; kinkless chain.

Beamco, Inc., Irving Park & Church Rds., Bensenville, Ill.
Custom-made precision parts and products

Bear Manufacturing Co., 2030 5th Ave., Rock Island, Ill.
Balancing machines

Beattie-Coleman, Inc., 1000 North Oliver St., Anaheim, Calif.

Beaver Gear Works, Inc., 1025 Parmele St., Rockford, Ill.

Beck Bros., 421 W. Sedgley Ave., Philadelphia 40, Pa.
Resistors

Beck Co., Harold, 3640 N. Second St., Philadelphia 40, Pa.
Pyrometer controllers

Becker Co., Richard F., 3020 N. Cicero, Chicago 41, Ill.
Plug-in timers for on-off cycling, process and production timing, etc.

Becker Div., Christian see Torsion Balance Co.

Beckman, Inc., Arnold O., 1020 Mission St., So. Pasadena, Calif.
Gas analyzers and complete analysis instrument systems for industrial, laboratory, and medical applications.

Beckman Div., Beckman Instruments, Inc., 2500 Fullerton Rd., Fullerton, Calif.
pH instruments and electro-metric pH equipment for completely automatic indication, control and recording
(See advertisement on page 43)

Beckman Insts., Inc., Process Insts., Div., & Scientific Instrs. Div., 325 N. Muller Ave., Anaheim, Calif.

Beckman & Whitley, 985 San Carlos Ave., San Carlos, Calif.
Anemometers, special cameras, thermal radiometers.

Beede Electrical Instrument Co., Inc., Penacook, N. H.
Small electrical panel instruments

Behlman Engineering Co., 114 S. Hollywood Way, Burbank, Calif.
Electronic a-c power supply (frequency ranges from subsonic to supersonic)
(See advertisement on page 161)

Behm & Sons Co., George, 24 McDonough St., Dayton 2, Ohio

Bekey Electric Co., Inc., 1327 S. Main St., Los Angeles 15, Calif.
Motors, frequency changers and generators, and associated rotary electrical equipment

Bel-Art Products, 4917 Murphy Place, West New York, N. J.
Plastic tubing and cylinders; instrument covers

Belden Mfg. Co., P.O. Box 5070A, Chicago 80, Ill.

Bell Aircraft Corp., P. O. Box 1, Buffalo 5, N. Y.
Servomechanisms; electronics; rocket engines; electronic control systems

Bell Automation Corp., 749 Monroe Ave., Rochester 7, N. Y.

Bell & Howell Co., 7100 McCormic Rd., Chicago 45, Ill.
Motion picture equipment including cameras, projectors, and accessories

Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio
Audio frequency instruments; amplifiers; hi-fi components

Bellco Glass, Inc., 413 N. 4th St., Vineland, N. J.
Glass apparatus; viscosity tubes; pipettes, and other components

Bellmore Gear Corp., 2307 Bellmore Ave., Bellmore, N. Y.
Fine pitch precision gears; gear assemblies; motor gear heads; gear trains; mechanical instrument assemblies; splines
(See advertisement on page 112)

Bellofram Corp., Blanchard Rd., Burling, Mass.
Friction free diaphragms; precision air pressure regulators

Bellows Co., 230 W. Market St., Akron 3, Ohio
Air motors; compressors; dryers

Belltron Mfg. Co., 400 Hoover Ave., Bloomfield, N. J.

Belmont Smelting and Refining Works, 330 Belmont Ave., Brooklyn 7, N. Y.

Belock Instrument Corp., 111th St. & 14th Ave., College Point, N. Y.
Military and naval force-control instruments; magnetic clutches; servo testing devices

Bemco Inc., 11631 Vanowen St., North Hollywood, Calif.
Vacuum pressure, humidity, salt spray, sunshine, rain, explosion, fungus, dust and other environmental test equipment.

Benchmaster Mfg. Co., 1835 W. Rosecrans Ave., Gardena, Calif.

Bendix Aviation Corp., Research Labs. Div., Northwestern Hwy. & 10½ Mile Rd., Southfield Twp., Mich.
Aircraft, marine and ground instrumentation; control and telemetering systems; testing instruments; meteorological instruments

Bendix Aviation Corp., Cincinnati Div., 3130 Wassau Rd., Cincinnati 8, Ohio

Bendix Aviation Corp., Computer Div., 5630 Arbor Vitae St., Los Angeles 45, Calif.
General purpose computers

Bendix Aviation Corp., Friez Instrument Div., 1400-P Taylor Ave., Baltimore 4, Md.
Temperature and humidity controls; gas and stoker controls; damper motors; electrical relays; temperature and humidity indicators and recorders; psychrometers; draft gages; anemometers; CO_2 analyzers

Bendix Aviation Corp., Eclipse-Pioneer Div., Teterboro, N. J.
Electrical and mechanical aircraft instruments; remote control systems

Bendix Aviation Corp., Pacific Div., 1160 Sherman Way, N. Hollywood, Calif.
Airborne radar, sonar, missile guidance; analog and digital telemetering; aircraft hydraulics; electromechanical actuators; timers, and motors

Bendix Aviation Corp., Pioneer-Central Div., Davenport, Iowa
Oxygen regulators; liquid oxygen systems; fuel flowmeter systems; flight instruments; ultrasonic cleaning systems; test equipment and tools

Bendix Aviation Corp., Red Bank Div., Eatontown, N. J.
Radioactivity instruments; generators; power supplies; special purpose electron tubes

Bendix Aviation Corp., Scintilla Div., Sidney, N. Y.
Electrical connectors; protected wiring assemblies, ignition systems for aircraft and industrial engines; diesel fuel injection equipment; ignition analyzers.

Bendix Aviation Corp., Utica Div., French Rd., Utica, N. Y.

Bennett Products Mfg. Co., see Farnsworth, Alto Calif.

Benson-Lehner Corp., 11930 W. Olympic Blvd., West Los Angeles 64, Calif.
Computers; digitizers; trace readers; printers; components

Bentley, Harris Manufacturing Co., 1003 Bently St., Conshohocken, Pa.
Flexible braided tubular sleeving for electrical conductors; flat braided lacing tape

Bergander Mfg. Co., 2129 Warner Ave., Chicago 18, Ill.
Hardware and tools

Berger & Sons, Inc., C. L., 37 Williams St., Boston 19, Mass.
Surveying instruments

Berger Scientific Supplies, Inc., 37 Williams St., Boston 19, Mass.
Laboratory supply house

Berkeley Div., Beckman Inst., Inc., 2200 Wright Ave., Richmond, Calif.
Electrical and electronic instruments for analysis and computing; frequency meters and standards; automatic-control systems; EASE analog simulation equipment

Berkshire Chemicals, Inc., 420 Lexington Ave., New York 17, N. Y.

Berkshire Laboratories, 582 Bank Village, Greenville, New Hampshire
Electronic instruments; plug-in components and circuits; pulse transformers; stroboscopes; special instruments
(See advertisement on page 229)

Berndt-Bach, Inc., 6962 Romaine St., Hollywood 38, Calif.
Sound-on-film cameras; electrical and electronic instruments; components

Beryllium Corporation, P. O. Box 1462 Reading, Pa
Beryllium copper alloy products

Beseler Co., Charles, 60 Badger Ave., Newark 8, N. J.
Optical projectors, galvanometer projectors, delineascopes

Best Scientific Glass App. Wks., 4527 N. Pulaski Rd. Chicago 30, Ill.

Beta Electric Corp., 333 E. 103rd St., New York 29, N. Y.
High voltage and very high voltage power supplies; testing equipment; electronic micro-ammeters; kilovoltmeters

Bethlehem Apparatus Co., Front & Depot Sts., Hellertown, Pa.
Laboratory apparatus; mercury cleaning machines

Better Coil & Transformer Corp., Goodland, Ind.
Coils; transformers

Betts & Betts Corp., 551 W. 52nd St., New York 19, N. Y.
Multiple circuit timers; controls; time delay relays; motor driven thermostatic interrupters

Beva Laboratory, P. O. Box 478, Trenton, N. J.
Power supplies; wave analyzers; amplifiers

Bicknell-Thomas Co., 90 Wells St., Greenfield, Mass.

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
Insulation testers; ground testers and ohmmeters; speed-measuring instruments; frequency meters; sliding-contact rheostats
(See advertisement on pages 108, 120, 187, 209)

Biggs Co., Carl H., 2255 Barry Ave., Los Angeles 64, Calif.
Potting compounds, epoxy types; cements and adhesives; epoxy types; protective metal coatings
(See advertisement on page 149)

Bin-Dicator Co., 13946 Kercheval, Detroit 15, Mich.
Automatic bin level indication and control, aerator units
(See advertisment on page 126)

Binswanger & Co., 645-655 Union Ave., Memphis 1, Tenn.
Lenses, prisms and filters; glass of every description

Bio-Rad Laboratories, 800 Delaware St., Berkeley, Calif.
Water deionizers; radioactive sources; crystals

Bird Electronic Corp., 1800 E. 38th St., Cleveland 14, Ohio
Switches; wattmeters

Bird & Co., Inc., Richard H., 1 Spruce St., Waltham 54, Mass.
Jewel bearings
(See advertisement on page 48)

PREFERRED by TECHNICIANS and ENGINEERS

New! TEFLON HIGH TEMPERATURE
HOOK-UP WIRE • CABLE
TUBING & SLEEVING
MORE COLORS • MORE SIZES
THE "IN-STOCK" LINE
JAN-C-76, MIL-W-76A, MIL-W-16878B, MIL-W-5086, MIL-C-7078, MIL-W-12349, MIL-I-631C, MIL-I-3190, JAN-T-713.
FREE CATALOGS ON REQUEST.

BIRNBACH RADIO CO. INC.
145 HUDSON ST., NEW YORK 13, N. Y.

WIRE • CABLE • JACKS and PLUGS

For more information circle **414** on inquiry card.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

Bishop & Co., J., Platinum Works, Malvern, Pa.
Laboratory apparatus; pyrometer tubes

Black & Decker Mfg. Co., 715 Pennsylvania Ave., Towson 4, Md.
Truck scales; testing machines

Black Light Corp., San Gabriel, California
(See advertisement on page 235)

Black, Sivalls & Bryson, Inc., 7500 E. 12th St., Kansas City 26, Mo., Climax Controls Div., Box 1529, Tulsa, Okla.
Diaphragm controls; drainers, regulators; pilots; relays; safety heads; controls for liquid level, pressure, temperature, flow of air, gas, vapor, steam, liquid....

Black & Webster, Inc., 445 Watertown St., Newton 58, Mass.
Pellet presses; time study apparatus

Blake Co., Edward, 437 Cherry St., West Newton 65, Mass.
Dimensional gages; surface-finish comparators and standard; surface-finish testing sets

Blanchard Machine Co., 64 State St., Cambridge 39, Mass.
Surface grinding machines; segment chucks; demagnetizers

Blickman, Inc., S.; 516 Gregory Ave., Weehawken, N. J.
Stainless steel, aluminum, monel, inconel, nickel, titanium, multimet alloy.

Bliley Electric Co., 200 Union Station Bldg., Erie, Pa.
Quartz piezo-electric crystals; frequency standards; delay lines

Bliss & Co., Inc., John, 84 Pearl St., New York 4, N. Y.
Marine instruments

Block Mfg. Co., Dairy Rd., Parktour, Md.

Blocksom & Co., E. 5th St. & Canal, Michigan City, Ind.

Blonder-Tongue Laboratories Inc., 9-25 Alling St., Newark 2, N. J.
Industrial TV cameras; R-F amplifiers; master TV systems; UHF and VHF converters; video monitors

Blue M Electric Co., 138th & Chatham St., Blue Island, Ill.
Furnaces and furnace-control systems

Blum & Co., Julius, Carlstadt, N. J.

Bock Machine Co., 2950 Jonrose Ave., Cincinnati 24, Ohio
Erichsen sheet metal testing machine

Bodine Electric Co., 2254 W. Ohio St., Chicago 12, Ill.
Motors, (all types of windings from 1/20000 to 1/6 hp.); speed reducers and non-reducer motors

Bodnar Industries Inc., 238 Auguenot St., New Rochelle, N. Y.

Boehme, Inc., H. O., 915 Broadway, New York 10, N. Y.
Gears, precision; telegraphy equipment; radiotelegraph communication equipment; tape perforators

Boehmke Optical Co., 3737 Bird Road, Miami 33, Fla.
Precision optical manufacturers

Boekel & Co., Wm., 509-519 Vine St., Philadelphia 6, Pa.
Laboratory apparatus

Bogart Manufacturing Co., 315 Siegel St., Brooklyn 6, N. Y.
Microwave components, radar assemblies

Bogue Electric Mfg. Co., 52 Iowa Ave., Patterson 3, N. J.
Voltage and speed regulators; magnetic amplifiers and controllers; ac and dc motors and generators; switchboards

Bomac Laboratories, Inc., Beverly, Mass.

Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
Magnetic amplifiers; regulated power supplies

Bond Electronics Corp., 60 Springfield Ave., Springfield, Ill.

Boone Instrument Co., 130 East 7th St., New York 9, N. Y.
Microscope illuminators; electrometer voltmeter, micromicroammeter, and ohmeter; custom-built microscope and photomicrographic set-ups.

Boonton Electronics Corp., Morris Plains, N. J.
Electric test equipment.

Boonton Molding Co., 326 Myrtle Ave., Boonton, N. J.
Boonton Radio Corp., P. O. Box 390, Boonton, N. J.
Electronic test instruments; aircraft glide slope and omni-range navigational system test equipment; metal film gauges

Borden Engineering, Div., Johnson Aircraft Engineering Co., Box 10, Morristown, N. J.
Fault locators; galvanometers; geophysical explorations equipment; ground detectors; rotary solenoids; aircraft cockpit controls and instruments; aircraft instrument test sets.

Borel & Co., Jules, 1015 Walnut St., Kansas City 6, Mo.
Watch material importers.

Borg Corp., Geo. W., Equipt. Div. 120 S. Main St., Jamesville, Wis.
Precision multiturn potentiometers; concentric scale, direct reading counting dials; sub-fractional induction and synchronous motors
(See advertisement on page 44)

Boston Auto Gage Co., 70 West St., Pittsfield, Mass.
Liquid level gages and allied lines

Boston Electronics Div., Norden-Ketay Corp., Snow & Union Sts., Brighten Station, Boston 35, Mass.
Medical research instruments; pressure and vacuum gages; VTVMs

Boston Insulated Wire & Cable Co., 65 Bay St., Boston 25, Mass.
High temperature single, coaxial, and multiconductor insulated wire; multiconductors; neoprene, silicone, plastic insulation and jackets.

Boston-Brady Mfg. Co., Stonewall & Bailey Sts., S.W., Atlanta, Ga.
Surveying instrument

Boulin Instrument Corp., 10 First Street, Pelham, N. Y.
Chronometric hand tachometers; wound stroboscopes, electrical stroboscopes; speed indicators, and portable and stationary tachometers
(See advertisement on page 209)

Bourns Laboratories, 6135 Magnolia Ave., Riverside, Calif.
Pressure and displacement pickups; resistors

Bowen & Co., Inc., 4712 Bethesda Ave., Bethesda 14, Md.
Cement testers

Bowmar Instrument Corp., 2415 Pennsylvania St., Fort Wayne 4, Ind.
Precision gear heads; speed reducers; mechanical counters; navigational counters; servomechanisms and electromechanical assemblies.

Bowser, Inc., Fort Wayne Div., 1302 E. Creighton Ave., Fort Wayne 2, Ind.
Liquid meters

Bowser Technical Refrigeration, Division of Bowser, Inc., Terryville, Conn.
Testing cabinets—low temperature, high altitude, relative humidity; explosion, sand and dust, and fungus chambers

Boylston Steam Specialty Co., 116 W. Illinois St., Chicago 10, Ill.
Regulating valves

Brabender Instruments, Inc., C. W., 50 E. Wesley St., South Hackensack, N. J.
Indicating and recording instruments; viscous and plastic material.

Bradford Machine Tool Co., 702 Porter St., Lansing, Mich.

Bradley Laboratories, Inc., 168 Columbus Ave., Brooklyn 17, N. Y.
Electrical instruments

Bradley Laboratories, Inc., 168 Columbus Ave., New Haven 11, Conn.

Bradshaw Instruments Co., 42 Flatbush Ave., Brooklyn 17, N. Y.
Electrical instruments

Brady Co., W. H., 727 W. Glendale Ave., Milwaukee 12, Wis.
Markers; labels; safety signs

Brainin Co., C. S., 320 Washington St., Mt. Vernon, N. Y.
Precious metal contact points and rivets; contact bimetals

Brand Co., William, 47 North St., Williamantic, Conn.
Plastic insulated wires; cables with or without textile braids; shields; nylon or vinyl jackets; plastic and coated sleevings; identification markers

Branson Corp., S. Jefferson Rd., Whippany, N. J.
Miniature magnetic and thermal time delay relays.

Branson Instruments, Inc., 37 Brown House Rd., Stamford, Conn.
Thickness gages (tube and sheet metal); ultrasonic generators

Branson Ultrasonic Corp., 37 Brown House Rd., Stamford, Conn.
Ultrasonic cleaning equipment
(See advertisement on page 235)

Bray Optical Co., 345 W. 1st St., Los Angeles 4, Calif.
Lenses, prisms and optical instruments; observation scopes

Bryant Chucking Grinder Co., Springfield, Vermont.

Brazilian Trading Co., Inc., 377 4th Ave., New York 16, N. Y.

Breeze Corporations, Inc., 700 Liberty Ave., Union, N. J.
Light-weight aircraft rescue and cargo hoists; aircraft starter generators; shielding conduit.

Brevel Prods., Inc., 601 W. 26th St., New York, N. Y.
Slow-speed fractional-HP worm and spur geared motors.

Brew & Co., Inc., Richard D., Airport Rd., Concord Plains, N. H.
Delay lines; pulse transformers.
(See advertisement on page 89)

Bridgeport Brass Co., 30 Grand St., Bridgeport 2, Conn.

Bridgeport Insulated Wire Co., 63 Brookfield Ave., Bridgeport 8, Conn.

Bridgeport Thermostat Div., Robertshaw-Fulton Controls Co., 155 Hill St., Milford, Conn.
Metallic bellows and thermostats

Briggs Filtration Co., River Road, Washington 16, D. C.
Filtration equipment for lubricating oils, fuels, coolants hydraulic fluids, insulating oils, compressed air lines, and instrument air
(See advertisement on page 53)

Brigham Co., R. B. Box 302, Frankton, Ind.
Photoelectric controls

Brinkmann Instruments, Inc., 378-380 Great Neck Rd., Great Neck, L. I., N. Y.
Photomicrographic equipment; balances

Bristol Co., 113 Bristol Rd., Waterbury 20, Conn.
Recording and automatic (pneumatic and electric) controlling instruments for pressure, vacuum, draft, absolute pressure, humidity, liquid level, flow, pH, temperature, speed; including recording barometers, voltmeters, ammeters, wattmeters, machine operation, motion and time recorders; control valves; telemetering instruments; process time cycle; potentiometers; thermal convertors; gas chromatography recorders; socket set and cap screws; aircraft electronic components
(See advertisement on pages 82, 154, 156, 161, 166, 178, 211, 218, 222

Bristol Brass Corp., 580 Broad St., Bristol 91, Conn.

Bristol Engineering Corp., Bristol, Pa.
Industrial and laboratory instrumentation; power supplies; components

Bristol Motor Div., see Vocaline Co. of Amer.

British Industries Corp., 80 Shore Rd., Port Washington, L. I., N. Y.
Electronic instruments and equipment
(See advertisement on page 65)

British Industries Corp., 80 Shore Rd., Port Washington, L. I., N. Y.
Audio amplifiers; solder; coil winding machines
(See advertisement on page 65)

Brodie Co., Inc., Ralph N., Alvardo & W. 137th Ave., San Leandro, Calif.
Positive-displacement rotary liquid meters; solenoid-pilot-operated valves.

Bronoptics Co., 4838 Van Nuys Blvd., Sherman Oaks, Calif.
Lenses; mirrors; prisms; coatings.

Brookfield Engineering Laboratories, Inc., 240 Cushing St., Stoughton, Mass.
Viscometers.
(See advertisement on page 244)

Brooks Rotameter Co., P. O. Box B-511 Lansdale, Pa.
Complete line of instrumentation, specializing in rotameters, for flow measurements and automatic control

Brooks & Perkins, Inc. 1950 W. Fort St., Detroit 16, Mich.
Magnesium sheet and plate, magnesium and titanium assemblies

Brown Electro-Measurement Corp., 4635 S.E. Hawthorne Blvd., Portland 15, Ore.
Electrical instruments and components

Brown-Brockmeyer Co., P. O. Box 989, Dayton 1, Ohio
Grinders; buffers; motors and motor controls

Brown-Morse Co., 110 E. Broadway Heights, Muskegon, Mich.
Laboratory furniture

Brown & Sharpe Mfg. Co., 235 Promenade St., Providence 1, R. I.
Machine shop instruments

Browning Laboratories, Inc., 750 Main St., Winchester, Mass.
Frequency meters; signal generators; cathode-ray oscillographs

Brubaker Inc., James E., 1865 Grove St., Glenview, Ill.
Motion-picture and still cameras (custom); optical components

Bruning Co., Inc., Chas., 4700 Montrose Ave., Chicago 41, Ill.
Drawing and surveying instruments

Bruno-New York Industries Corp., 460 W. 34th St., N. Y. 17, N. Y.

Brunson Instrument Co., 1405 Walnut St., Kansas City 6, Mo.
Surveying instruments

Brunswick Instruments, P. O. Box 813, New Brunswick, N. J.
Phase sequence indicators; voltmeter inverters; voltage coefficient test sets

Brunt & Co., 6905 W. 65th St., Chicago 38, Ill.

Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio
Oscillographs, vibration and motion pickups; amplifirs; surface comparators and analyzers; electrical testing instruments; components
(See advertisement on pages 22-23)

Bryant Chucking Grinder Co., P. O. Box 739, Springfield, Vt.
Magnetic drums for digital computers; inventory control systems; tape to card converters

Buchanan Electrical Products Corp., 225 U. S. Highway #22, Hillside, N. J.
Terminal blocks; terminals; solderless installation tools

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio
Electronic components; instrument housings and panels

Buehler, Ltd., 2120 Greenwood St., Evanston, Ill.
Laboratory supply house

Buffalo Meter Co., 2917 Main St., Buffalo 14, N. Y.
Liquid meters for measurement of cold water, hot water, oils, chemicals; integrating registers, cumulative, setback, or predetermined control
(See advertisement on page 107)

Buffalo Scale Co., 46 Letchworth St., Buffalo 13, N. Y.
Scales

Buggie & Co., H. H., 726 Stanton St., Toledo 1, Ohio
Connectors, plugs, jacks, clips

Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.
Precision optical components and instruments

Builders-Providence, Inc., 345 Harris Ave., Providence 1, R. I.
Instruments for indicating recording controlling flow, liquid level, pressure, temperature, and weight

Bullard Co., E. D., 275 Eighth St., San Francisco 3, Calif.
Gas leak detectors

Bunnell Company, J. H., 81 Prospect St., Brooklyn 1, N. Y.
Tape winders; pen registers; tape transmitters; tape unwinder

Burcott Mills, 302 N. Loomis, Chicago, Ill.

Burdett Mfg. Co., 4920 So. Monitor, Chicago 38, Ill.

Burgess Battery Co., Freeport, Ill.
Dry cell batteries for flashlights, lanterns, portable and farm radios, ignition, hearing aids, industrial electronic and transistor applications
(See advertisement on page 60)

Burke Electric Co., 8544 Grand River Ave., Detroit 4, Mich.
Fractional horsepower motors

Burke & James, Inc., 321 S. Wabash, Chicago 4, Ill.
Photographic equipment for research and laboratory departments

Burke, Louis, 41 John St., New York, N. Y.
Stop watches and chronometers

Burling Instrument Co., 16 River Rd., Chatham, N. J.
Automatic temperature controllers
(See advertisement on page 213)

Burlington Instrument Co., 203 North 3rd St., Burlington, Iowa
Electrical control apparatus

Burndy Corp., Norwalk, Conn.
Connectors, plugs and jacks

Burnell & Co., Inc., 10 Pelham Parkway, Pelham Manor, N. Y.
Wave filters; components

Burrell Corp., 2223 Fifth Ave., Pittsburgh 19, Pa.
Scientific instruments & laboratory supplies

Burroughs Corp., Electronics Inst. Div., 1209 Vine St., Phila. 7, Pa.
Computers; automatic regulators; electrical and electronic instruments and components

Burrows Equipment Co., 1316 Sherman Ave., Evanston, Ill.
Moisture testers

Burton Mfg. Co., 2520 Colorado Ave., Santa Monica, Calif.
Aircraft instruments; ground support testing equipment; meteorological equipment; medical, dental, hospital, laboratory, industrial equipment

Burton-Rogers Co., Sales Div. Hoyt Electrical Instrument Works, Inc., 42 Carleton St., Cambridge, Mass.
D-c and a-c meters

Bush Associates, G. F., Box 175, Princeton, N. J.
Rubber, plastics and textile testers; laboratory apparatus

Bushnell & Co., D. P. 273 Bushnell Bldg., Pasadena 1, Calif.
Binoculars, microscopes, telescopes, and other optical instruments; accessories and supplies
(See advertisement on page 190)

Butler Manufacturing Corp., 5516 Dorsey Lane, Washington 16, D. C.
Counters; digital computers switches; components

C

CBS-Hytron Div., Columbia Broadcasting System, Inc., 100 Endicott St., Danvers, Mass.
Electron tubes; semiconductors

CGS Labs., Inc., 391 Ludlow St., Stamford, Conn.
Translators; converters; receivers; antenna matching networks; static rejectors; transmitters

C and H Supply Co., 415 E. Beach Ave., Inglewood 3, Calif.
Nameplates; marking devices

Caddell-Burns Mfg. Co., Inc., 40 E. 2nd St., Mineola, L. I. N. Y.

Cadillac Gage Co., 20316 Hoover Road, Detroit 5, Mich.
Electrohydraulic servo valves; valve-actuator assemblies; precision gages; ring, plug, cylindrical, thread gages

Cady & Co., E. J., 630 N. Harlem Ave., River Forest, Ill.
Non-destructive testers for physical properties

Cahn Instr. Co., 14511 Paramount Blvd., Paramount, Calif.
Portable, battery-operated, electromagnetic microbalance

Cal-Astro Optical Laboratories, 30 N. San Gabriel, Pasadena, Calif.
Precision optical parts

Calcetron, Inc., 2444 Beverly Rd., St. Paul 4, Minn.
Fluorimeters

Caldwell, Farley M., 3201 Golden Ave., Cincinnati 26, Ohio

Caledonia Electronics and Transformer Corp., Maple St., Caledonia, N. Y.
Audio, power and pulse transformers; charging and saturable reactors; high voltage dc power supplies

Calidyne Co., 120 Cross St., Winchester, Mass.
Accelerometers and vibration pickups; a-f. voltage standards; power supplies

California Computer Products, 3927 W. Jefferson Blvd., Los Angeles 16, Calif.
X-Y recorders operated by step motors actuated by pulses from a digital differential analyzer

California Magnetic Control Corp., 11922 Valerio St., N. Hollywood, Calif.
Electrical instruments; testers; transformers

California Tech. Indust., 1421 Old County Rd., Belmont, Calif.
Automatic circuit testers; radome test equipment; VSWR measuring systems; flight and altitude simulators; microwave antenna pattern recording equipment.

Callahan & Co., E. J., 5 N. Haven St., Baltimore, Md.
Laboratory supply house

Calresin Corp., 4545 Brazil St., Los Angeles 39, Calif.

Cal-Tronics Corp., 11307 Hindry St., Los Angeles 45 Calif.
Production, depot and field test equipment for rada computer and missile systems

Cambridge Instrument Co., Inc., 3614 Grand Cent Terminal, New York 17, N. Y.
Scientific and industrial instruments

Cambridge Thermionic Corp., 445 Concord Ave., Cambridge 38, Mass.
RF and IF coils; coil forms; insulated terminals; terminal boards; solder terminals; panel hardware; chassis hardware

Cambridge Wire Cloth Co., Cambridge 4, Md.

Cameron Iron Works, Inc., P. O. Box 1212, Houston, Texas
Pressure gages; dynamometers; valves and valve-operating units

Cameron Surgical Specialty Co., 666 W. Division St., Chicago 10, Ill.
Surgical instruments

Campbell Co., J. A., 645 Wardlow Rd., Long Beach 7, Calif.
Thermometer wells and automatic controllers

Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
Luminous, phosphorescent and fluorescent paints for applications on dials, panels, nameplates; flat, convex and concave surfaces

Cannon Electric Co., 3209 Humboldt St., Los Angeles, 31, Calif.
Multiple circuit connectors for instruments; dc solenoids
(See advertisement on page 79)

Cannon Instrument Co., Box 812, State College, Pa.
Viscometers

Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
Radio and radar instrumentation, and test equipment

Capcon Corp., 25 Willett St., New York 2, N. Y.
Capacitors and filters

Capeway Instrument Corp., Highland Ave. at N. Bedford St., East Bridgewater, Mass.
Elapsed time recorders

Carad Corp., 2850 Bay Rd., Redwood City, Calif.
Pulse transformers; pulse forming networks; wave filters & toroidal inductors; modulators

Carbon Div. Stackpole, Carbon Co. St., Marys, Penna.

Carborundum Co., Niagara Falls, N. Y.

Cargille Scientific; Inc., 117 Liberty St., New York 6, N. Y.
Chemical laboratory and photographic devices; immersion liquids for inspecting glass & quartz

Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn.
Electrical and electronic instrumentation. control systems; power units; radar equipment; industrial TV; components

Carling Electric, Inc., 505 Park Ave., West Hartford, Conn.

Carlingo Commodities Corp., 15 William St., New York 5, N. Y.
Pyrometers and temperature controllers

Carol Electronics Corp., 315 W. Stephens St., Martinsburg, W. Va.

Carpenter Steel Co. 125 W. Bern St., Reading, Penna.
Tool and die steels; stainless steels, silicon and high nickel alloys; super alloy steels.

Carroll Co., J. B., 319 N. Albany Ave., Chicago 12, Ill.
Products manufactured from plastic sheet materials

Carruthers & Fernandez, Inc., 1501 Colorado Ave., Santa Monica, Calif.
Control valves; power units; solenoids; pressure switches

Carter Mfg. Corp., 23 Washington St., Hudson, Mass.
Potentiometers, potentiometer test equipment

Carter Motor Co., 2711 W. George St., Chicago 18, Ill.
Dc to ac converters; dynamotors; generators; magmotors; inverters.

Carter Parts Co., 3401 Madison St., Skokie, Ill.
Relays; resistors; rheostats and switches

Carver, Inc., Fred S., One Chatham Road, Summit, N. J.
Testing Machines; laboratory presses; high-pressure instrumentation

Cash Co., A. W., 115 So. Main St., Decatur, Ill.
Process and combustion controls; pressure reducing relief, back pressure regulating, hydraulic, expansion valves; governors; water regulators; pressure and temperature controls
(See advertisement on page 40)

Cash Valve Mfg. Corp., A. W., 6619 East Wabash, Decatur 60, Ill.
Pressure, vacuum and temperature controllers; control valves

Cassell Co. John R., 110 W. 42nd. St., New York 36, N. Y.

Cast Optics Corp., 123 Newman Street, Hackensack, N. J.
Laboratory supply house

Cedar Engineering, Inc., 5806 W. 36th St., Minneapolis 16, Minn.
Aircraft electro mechanical controls and systems, including accelerometers, gyros, autopilots, sensing, and guidance devices

Central Instrument Co., 565 E. Milwaukee, Detroit 2, Mich.
Pressure and vacuum indicators and recorders

Central Research Labs., Inc., Red Wing, Minn.
Remote handling equipment; master-slave manipulators; dielectric constant and loss measuring equipment; ultra high-speed cathode-ray oscillographs.

Central Scientific Co., 1700 Irving Park Blvd., Chicago 13, Ill.
Scientific instruments & laboratory apparatus
(See advertisement on page 207)

Centralab Div., Globe Union Inc., 900 E. Keefe Ave., Milwaukee 4, Wis.
Carbon and wirebound and variable resistors; ceramic and phenolic switches; tubular and disc ceramic capacitors; packaged electronic circuits. steatite ceramics; semi-conductors

Centrico, Inc., 75 W. Forest Ave., Englewood, N. J.
Centrifuges

Century Controls Corp., Allen Blvd., Farmingdale, N. Y.
Tubing fittings; pneumatic valves and regulators

Century Electronics & Instruments, Inc., 1333 N. Utica St., Tulsa 10, Okla.
Recording oscillographs; electronic instruments; pressure switches

Century Geophysical Corp., 1333 N. Utica Ave., Tulsa 10, Okla.
Geophysical instruments

Century Instrument Co., 565 E. Milwaukee Ave., Detroit 2, Mich.
Temperature regulators and recording controllers for water heaters, process and plating tanks; diaphragm valves

Ceramseal Co., P. O. Box 25, New Lebanon Center, N. Y.
High temperature alumina ceramic to metal sealed terminals, sapphire to metal and high pressure seals

Cerro de Pasco Sales Corp., 300 Park Ave., New York 22, N. Y.
Low temperature melting bismuth alloys

C & H Supply Co., 415 E. Beach Ave., Inglewood 3, Calif.

Chace Co., W. M., 1600 Beard Ave., Detroit 9, Mich.
Thermostatic bimetals

Chadwick-Helmuth Co., 472 E. Duarte Rd., Monrovia, Calif.
Stroboscopic light synchronizers; pulse generators for stroboscopes; oscilloscope synchronizers

Chaloux & Co., John J., Watervliet, N. Y.

Champion Spark Plug Co., Ceramic Div., 8525 Butler Ave., Detroit 11, Mich.

Chandler & Stedman, 398-A Newton St., Waltham 54, Mass.
Special laboratory apparatus

Channer Corp., 1488 Skokie Blvd., Highland Park, Ill.

Chapman Laboratories, P. O. Box 207, West Chester, Pa.

Charvos-Roos Corp., 185 Hackensack St., East Rutherford, N. J.
Drawing instruments

Chase Brass & Copper Co., Waterbury, Conn.

Chatham Controls Corp., 110 Summit Ave., Summit, N. J.

Chatham Electronics Corp., Div. of Gera Corp., 630 W. Mt. Pleasant Ave., Livingston, N. J.
Electronic devices; radio tubes; equipment and mechanical assemblies; radiological survey meters. radio communication equipment; amplifiers; relays; selenium rectifiers; transformer-rectifier units

Chatillon & Sons, John, 85 Cliff St., New York 38, N. Y.
Precision springs; force measuring instruments.

Chelsea Clock Company, 284 Everett Ave., Chelsea, Mass.
Clock, and clock movements

Chemalloy Electronics Corp., Gillespie Airport, Santee, Calif.
Microwave instrumentation; alloys and solders

Chemical Rubber Co., 2310 Superior, East, Cleveland 14, Ohio
Laboratory supplies

Chemiquip Co., 460 W. Broadway, New York 12, N. Y.
Pressure snubbers

Cherry-Channer Corp., 42 N. Skokie Valley Rd., Highland Park, Ill.

Chesapeake Instrument Corp., Shadyside, Md.
Electroacoustic instruments; piezoelectric and magnetostrictive hydrophones and projectors; transient pressure air blast gages

Chester Cable Corp., Chester, N. Y.
Flexible control cable; coaxial electric cable, and wire

Chicago Apparatus Co., 1735 N. Ashland Ave., Chicago 22, Ill.
Laboratory supplies

Chicago Condenser Corp., 3255 W. Armitage Ave., Chicago 47, Ill.
Paper and plastic film dielectric capacitors

Chicago Dial Co., 2917 S. La Salle St., Chicago 16, Ill.

Chicago Dial Indicator Co., 180 N. Wacker Dr., Chicago 6, Ill.
Machinists's dial indicators

Chicago Electric Tachometer Co., 111 Lake St., Madison, Ohio
Electric tachometers; portable tachometers; speed indicators

Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill.
Transformers

Chicago Industrial Instruments Co., 865 N. Sangamon St., Chicago 22, Ill.
Radio, electronic and industrial test equipment

Chicago Miniature Lamp Works, 1500 N. Ogden Ave., Chicago 10, Ill.
Miniature, sub-miniature incandescent lamp bulbs

Chicago Molded Products Corp., 1020 N. Kolmar Ave., Chicago 51, Ill.
Plastic components, stock plastic knobs, thermoplastic sheet and film

Chicago Rawhide Mfg. Co., 1301 Elston Ave., Chicago 22, Ill.
Non-metallic gears and pinions. oil seals; diaphragms packings; etc.

Chicago Screw Co., 2701 Washington Blvd., Bellwood, Ill.
Socket, cap, set screws; hex keys and nuts; studs.

Chicago Standard Transformer Corp., 3501 Addison St., Chicago 18, Ill.
Instrument and power transformers

Chicago Telephone Supply Corp., 1142 W. Beardsley Ave., Elkhart, Ind.
Variable resistors; switches

Chicago Wheel & Mfg. Co., 1101 W. Monroe St., Chicago 7, Ill.

Chicago Thrift-Etching Corp., 1555 N. Sheffield Ave., Chicago 22, Ill.
Etched and lithographed nameplates; dials; scales and panels

Christie Electric Corp., 3410 West 67th St., Los Angeles 43, Calif.
Automatically regulated battery chargers; manually controlled d-c power supplies.

Chrono-Log Corp., P. O. Box 4587, Philadelphia 31, Pa.
Digital Timing Units.

Churchill Lighting Corp., 344 Franklin St., Melrose 76, Mass.
Airborne aluminum cases; explosion-proof cases.

Ciba Co., Inc., 631 Greenwich, New York 14, N. Y.

Cinch Manufacturing Co., 1026 S. Homan Ave., Chicago 24, Ill.
Etched circuit boards; printed circuits; commutators, terminal boards; flexible printed cabling; printed circuit connectors; printed circuit sockets.

Cincinnati Clock & Instrument Co., 1060 Hulbert St., Cincinnati 14, Ohio
Circuit breaker analyzers

Cincinnati Sub Zero Products, 3930 Reading Rd., Cincinnati 29, Ohio
Temperature and altitude cabinets

Cincinnati Time Recorder Co., 1733 Central Ave., Cincinnati 14, Ohio
Time recorders; clocks; program control systems

Cinema Engineering Co., 1100 Chestnut St., Burbank, Calif.
Ceramic bobbin and encapsulated types wire-wound resistors; decade resistance boxes; instrument switches; rotary tap controls

Circle Gauge Co., P. O. Box 2524, Hollywood 28, Calif.
Piston ring gages

Circle Seal Products Co., Inc., Box 5455 Pasadena, Calif.
Precision check valves; relief valves, and manual shut-off valves

Circo Equipment Co., 51 Terminal Ave., Clark (Rahway), N. J.
Ultrasonic and detergent cleaning machines

Circon Component Co., Santa Barbara Municipal Airport, Goleta, Calif.
Electrical connectors; indicating lamp assemblies; precision miniature hardware: instrument screws, nuts, eyelets, rivets, flat and lock washers

Circuit Instruments Inc., 1927 First Ave., S., St. Petersburg, Fla.
Precision wire-wound, single, multiturn, linear and non-linear potentiometers

Circular Tool Co., Inc., 763 Allen Ave., Providence 5, R. I.

Cirtronics Corp. of America, 137 Saticoy St. Van Nuys, Calif.
Etched printed circuit boards and assemblers

Cities Service Oil Co., 54 Wall St., New York 5, N. Y.
Automotive and aviation service instruments

Clairex Corp., 50 W. 26th St., New York 10, N. Y.
Photoconductive-type photocells

Clare & Co., C. P., 3101 Pratt Blvd., Chicago 45, Ill.
Relays; electric counters and electric mechanical specialties

Clark Co., Geo. P., 150 Canal St., Windsor Locks, Conn.

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio
Machine tool control systems

Clark Crystal Co., Inc., 29 Farm Rd., Malboro, Mass.

Clark Instrument Inc., 10200 Ford Road, Dearborn, Mich.
Dial indicators, testing machines

Clark Mfg. Co., 1830 E. 38th St., Cleveland 14, Ohio
Torque-measuring equipment; dynamometers; magnetic-particle clutches

Clark & Sons, Co., Alvan, 58 Day St., West Somerville, Mass.
Astronomical and terrestrial telescopes

Clarostat Mfg. Co., Inc., Washington St., Dover, N. H.
Potentiometers, resistors, switches

Clary Corp., 408 Junipero St., San Gabriel, Calif.
Computers; readout machines; computer components; printers; recorders; tape punch equipment

Clay-Adams Co., Inc., 141 E. 25th. St., New York 10, N. Y.
Centrifuges, laboratory apparatus, medical equipment, microscope illuminators

Clebar Watch Co., 15 W. 44th St., New York 36, N. Y.
Stop watches; timers and chronographs

Clegg Laboratories, Morristown, N. J.

Cleveland Fuel Equipment Co., 1111 Brookpark Rd., Cleveland 9, Ohio
Furnace controllers; pyrometers and gages

Cleveland Instrument Co., Inc., 735 Carnegie Ave., Cleveland 15, Ohio
Precision measuring instruments

Cleveland Metal Specialties Co., 1753 E. 21st St., Cleveland 14, Ohio
Printed circuits and allied components

Cleveland Process Co., 1967 E. 57th St., Cleveland 5, Ohio
Heating elements, infrared sources; thermowells

Cleveland Tungsten, Inc., 10200 Meech Ave., Cleveland 5, Ohio

Cleveland Wire Spring Co., 1281 E. 38th St., Cleveland 14, Ohio

Cleveland Wire Spring Co., 300 E. Main St., DeSoto, Missouri
Mechanical springs, extension springs, torsion springs, wire forms

Clevite Research Center, 540 East 105th St., Cleveland 8, Ohio
Industrial and laboratory instrumentation and components; magnetic recorders and memory devices; digital computers

Clifford Mfg. Co., Div., Standard-Thomson Corp., 152 Grove St., Waltham 54, Mass.
Metallic bellows and diaphragms; thermostatic assemblies; packless valves

Clifton Precision Products Co., Inc., Broadway & Maple Ave., Clifton Heights, Pa.
Synchros; instrument motors; servomotors; navigational computers

Climax Controls Div., see Black, Sivalls and Bryson, Inc.

Clippard Instrument Laboratory, Inc., 7390 Colorain Ave., Cincinnati 14, Ohio
Electronic apparatus and electric instruments

Clough-Brengle Co., 6014 Broadway, Chicago 40, Ill.
Electrical instruments, communication testing instruments

Coaxial Connector Co., 37 N. 2nd Ave., Mt. Vernon, N. Y.
Coaxial RF connectors; cable and harness assemblies; microwave components; radar and aircraft antennae; end seals; miniature connectors; electronic subassemblies

Cobehn, Inc., Passaic Ave., Caldwell, N. J.
Equipment and solvents for cleaning instruments and precision components

Cobon Plastics Corp., 41 Lafayette St., Newark 2, N. J.

Cohn Corp., Sigmund, 121 So. Columbus Ave., Mt. Vernon, N. Y.
Galvanometer suspension ribbon
(See advertisement on page 250)

Coil Winding Equipment Co., 19 Maxwell Avenue, Oyster Bay, N. Y.
Coil winding equipment; wire tension devices

Cole Co., H., 82 North High St., Columbus 15, Ohio
Surveying instruments

Coleman Engineering Co., Inc., 6040 W. Jefferson Blvd., Los Angeles 16, Calif.
Centrifuges; analog-to-digital converters; digital readout systems; data reduction machines; oscillogram and ballistics film readers

Coleman Instrument Co., 716 So. Troost Ave., Tulsa 10, Okla.
Oscillographs

Coleman Instruments, Inc., 318 Madison St., Maywood, Ill.
Electrical measuring instruments for technical applications

Colin Campbell Co., Inc., Westville Ave., Ext., Danbury, Conn.
Transformers for electronics, including hermetically sealed, encapsulated, Fosterite impregnated, toroidal and miniature—to customer specifications, commercial or military application

Collectron Corp., 304 E. 45th Street, New York 17, N. Y.

Collins Corp., G. L., 2820 Hulett St., Long Beach, Calif.
Pressure transducers

Collins Microflat Co., 3249 W. El Segundo Blvd., Hawthorne, Calif.
Granite Surface plates

Collins Radio Co., Cedar Rapids, Iowa
Electronic apparatus

Collyer Industrial Wire Co., 245 Roosevelt Ave., Pawtuckett, R. I.
Power cables; control cables; lighting and building wire and cable

Colortone Electronics Inc., 100 Frank Road, Hicksville, L. I., N. Y. (14)
Annunciators; electronic hardware; components

Columbia Electric Mfg. Co., 4519 Hamilton Ave., N. E., Cleveland 14, Ohio
Rheostats; instruments; shunts; switchboards and special electrical equipment; motor generator sets; synchronous motors

Columbia Technical Corp., 61-02 31st Ave., Woodside 77, N. Y.
Delay lines

Colvin laboratories, Inc., 364 Glenwood Ave., East Orange, N. J.
Pressure displacement and acceleration pickups; voltage-dividing resistors; components
(See advertisement on page 168)

Comar Electric Co., 3349 W. Addison St., Chicago 18, Ill.
Relays; solenoids; switches

Combustion Control Div., Electronics Corp. of America, 718 Beacon St., Boston 15, Mass.
Combustion controls

Commercial Controls Corp., 1 Leighton Ave., Rochester, 2, N. Y.
Automatic writing machines; recorders; reproducers

Commercial Iron Works, 2424 Porter St., Los Angeles, 21, Calif.
Blinds, spectacle type; leveling saddles; orifice fittings; orifice flanges; orifice plates

Commercial Optical Manufacturing, Inc., P. O. Box 474, Huntington, W. Va.
Optical components; low-reflection lenses

Commercial Plastics Co., 945 George St., Chicago 14, Ill.
Clamps, straps, fasteners; plastic tubing, and fittings
(See advertisement on page 232)

Commercial Products Div., Aircraft Armaments Co., York Rd., Cockeysville, Md.
Microwave and r-f instruments; Conelrad

Commercial Research Division, George L. Nankervis Co., 15300 Fullerton Ave., Detroit 27, Mich.
Instruments and equipment for measurement, indication and calibration of rates of flow; filters; amplifiers;

Communication Accessories Co., Lee's Summit, Mo.
Toroidal coil and transformers; filters; amplifiers; components

Communication Measurements Lab., Inc., 350 Leland Ave., Plainfield, N. J.
Testers; rectifiers; voltage regulators; communication measuring equipment

Compar Instrument Co., 455 Douglas Road, Holland, Mich.
Comparators, surface-finish microscopes and testers

Computer Corp. of America, Div. of Bruno-New York Industries Corp., 460 W. 34th St., New York 1, N. Y.
Analog computers; microwave instrumentation accessories; "IDA", integro-differential analyzer; electrical and electronic instruments and components

Computer Control Co., Inc., 92 Broad St., Wellesley 57, Mass.
Special purpose computers; data handling systems; electronic control systems.

Computer Engineering Assocs., Inc., Box 5157 Pasadena, Calif.
General and special purpose direct analogy electric analog computors (DAEAC)

Computer Instruments Corp., 92 Madison Ave., Hempstead, L. I.
Position level and dimensional instrumentation; resistors; components

Computer Measurements Corp., 5528 Vineland Ave., North Hollywood, Calif.
Computer-measurements electronic counting, timing and controlling instruments

Comtor Co., 83 Rumford Ave., Waltham 54, Mass.
Precision internal and external comparator-type diameter gages

Conant Bros. Co., 427 Riverside Ave., Medford 55, Mass.
Non-lubricated plug valves

Conant Laboratories, 6500 "O" St., Lincoln 5, Neb.
Rectifiers, copper oxide and selenium

Conax Corp., 2300 Walden Ave., Buffalo 25, N. Y.
Thermocouple glands and pressure seals

Condenser Products Co., 140 Hamilton St., New Haven, Conn.

Conduflex Corp., 201 Harrison Place, Brooklyn 37, N. Y.
Flexible conduit; conduit assemblies; fittings and couplings

Conn, Ltd., C.G., Electronics Div., 1101 E. Beardsley Ave., Elkhart, Ind.
Stroboscopes

Conn-Craft Co., 301 Fairlawn Ave., Waterbury, Conn.
Fabricating and engraving of plastic instrument covers; dial faces; identification markers; instruction plates; edge-lighted panels

Connecticut Telephone and Electric Div., Great American Industries, Inc., Meriden, Conn.
Electronic devices

Connelly, Inc., 3154 S. California Ave., Chicago 8, Ill.
Gages and manometers; B T U indicators; H_2S testers

Conoflow Corp., 2100 Arch St., Philadelphia 3, Pa.
Final control elements, including: valves for throttling control and "on-off" service; pneumatic power operators; air regulation equipment
(See advertisement on pages 172, 175, 236, 238)

Conrad, Inc., 141 Jefferson St., Holland, Mich.
Test chambers

ConRay Corp., 29 W. Apple St., Dayton 2, Ohio

Consolidated Avionics Corp., 66 Brooklyn Ave., Westbury, N. Y.

Consolidated Electrodynamics Corp., 300 N. Sierra Madre Villa, Pasadena, Calif.
Equipment for measurement, analysis, process control, data processing, and high vacuum technology

Consolidated Electrodynamics Corp., Rochester Div., 1775 Mt. Read Blvd., Rochester 3, N. Y.
High-vacuum electronic processing equipment; induction and arc furnaces; leak detectors; pumps; gages; valves; baffles

Consolidated Molded Products Co., 309 Cherry St., Scranton 2, Pa.

Consolidated Resistance Co. of America, Inc., 44 Prospect St., Yonkers, N. Y.
Resistors

Consolidated Vacuum Div.—see Consolidated Electrodynamics, Rochester Div.

Consolidated Wire & Assoc. Cos., 1635 S. Clinton St., Chicago 16, Ill.
Electronic, electrical wires and cables

Constantin & Co., L. L., Rt. 46 & Franklin Ave., Lodi, N. J.

Contact, Inc., 236 Main St., Cambridge 42, Mass.

Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio
Standard and special resistors

Continental Connector Corp., 3030 Northern Blvd., Long Island City 1, N. Y.

Continental Die Casting Corp., 9615 Grinnell Ave., Detroit 13, Mich.

Continental-Diamond Fibre Corp., Div., Budd Co., Inc., Newark 52, Del.
Insulating materials

Continental Electric Co., 715 Hamilton, Geneva, Ill.
Photoelectric tubes and equipment

Continental Electric Equipment Co., Box 1055, Cincinnati 1, Ohio
Control boards and housings; electrical distribution equipment

Continental Equipment Co., Coraopolis, Pa.
Valves

Continental Foundry & Machine Co., See Copes Vulcan Div.

Continental Screw Co., 459 Mt. Pleasant St., New Bedford, Mass.
Complete line of standard, slotted, Phillips head, sheet metal, thread-cutting and special screws

Continental Wire Corp., 560 Maryland Ave., York, Penna
Insulated electrical conductors, communication and instrument hook-up wire

Control Components Co., 1 Holden St., Brookline 46, Mass.
Servo amplifiers; torque motors; linear motion and velocity transducers

Control Corporation, 718 Central Ave., Minneapolis 14, Minn.
Automatic and remote control equipment

Control Devices, Inc., 8299 Nine Mile Rd., Van Dyke, Mich.
Process-control and dimensional control instrumentation; ballistic instruments

Control Electronics Company, Inc., 1925 New York Ave., Huntington Station, N. Y.
Delay lines

Control Engineering Co., 8007 Joy Road, Detroit 4, Mich.
Process timing and automatic-control devices; inspection and testing instruments; counters

Control Panel Corp., 517 W. Monroe St., Chicago 6, Ill.
Automatic control panels

Control Products, Inc., P. O. Box 8037, Pittsburgh 16, Pa.
Precision snap-action waterproof switches and thermal switches

Control Specialists, Inc., 115 E. Arbor Vitae, Inglewood 1, Calif.
Special purpose automatic control systems for aircraft, missiles, and industrial machines and processes

Control Specialty Corp., P. O. Box 4524, Houston 13, Texas
Automatic well testing, transfer, tank switching, and well-flow controls; control panels; hermetic sealing

Controls Co. of America, Soreng Sales Div., 9555 Soreng Ave., Schiller Park, Ill.
Solenoids and relays; remote control equipment

Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill. Research Div., 8100 Monticello Drive, Skokie, Ill.
Electrical control devices; metal bellows; vapor meters; telephone protective and distributing apparatus; aircraft instrumentation; relays; pressure switches

Cook Optical, North Brookfield, Mass.

Cook Research Laboratories, L. H., Box 696, Menlo Park, California
Precision testing instruments for oil industry oil well cement testing equipment, combustible gas indicators, depth pressure recorders

Cooley Electric Mfg. Co., 38 S. Shelby St., Indianapolis, 7, Ind.

Cooper Co., Clark, Palmyra, N. J.
Timers; alarms, and controllers

Cooper-Hewlitt Electric Co., 720-732 Grand St., Hoboken, N. J.
Ultraviolet and monochromatic light sources; quartz components; optical components

Co-Optical Mfg. Co., 1500 W. 59 St., Chicago 36, Ill.

Coors Porcelain Co., Golden, Colo.
Chemical and scientific porcelain

Cope, T. J., Division Rome Cable Corp., Third & Walnut Sts., Collegeville 22, Pa.
Instrument tubing support system; instrument tubing

Copease Corp., 425 Park Ave., New York 22, N. Y.
Photocopying equipment

Copes Vulcan Div., Blaw-Knox Co., 986 W. 26th St., Erie 4, Pa.
Automatic controllers for boilers, desuperheaters, pumps, etc; control valves

Corbett Science Labs., F. W., 3115 Venice Blvd., Los Angeles 19, Calif.
Industrial and medical; ultrasonic equipment; cardiac amplifying and indicating apparatus; graph followers and plotters

Corbin Screw Div., American Hardware Corp., New Britain, Conn. Tachometers and speedometers

Cornell-Dubilier Electric Corp., 333 Hamilton Blvd., So. Plainfield, New Jersey
Mica, dykanol, paper, wet and dry electrolytic capacitors; vibrators; converters; antennas; printed circuitry

Corning Glass Works, P. O. Box 544, Corning, N. Y.
Tubing; blown and pressed glassware; special glasses for scientific or technical applications

Corson Electric Mfg. Corp., 540 39th St., Union City, N. J.

Cosa Corporation, 405 Lexington Ave., New York 17, N. Y.
Dynamometers; gas density meters; balancing machines; components
(See advertisement on page 66)

Counter & Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wis.
Circuit-control pre-set counters with automatic reset

Courtney & Co., 1711 Walnut St., Philadelphia 3, Penna.

Crafts Co., Arthur A., 603 Newbury St., Boston 15, Mass.

Craig Systems, Inc., 90 Holten St. Danvers, Mass.
Cases for components during transit and storage; consoles; relay racks

Cramer Controls Corp., Centerbrook, Conn.
Western Div., 11601 Jefferson Blvd., Culver City, Calif.
Interval timers; running time meters; time switches; signal control switches; time delay switches

Crane Co., see Hydro Aire

Crane Packing Co., 6400 Oakton St., Morton Grove, Ill.
Optical flats; monochromatic light sources

Cratex Manufacturing Co., 81 Natoma St., San Francisco 5, Calif.
Rubberized abrasives

Crawford Fitting Co., 884 E. 140 St. Cleveland 10, Ohio
Tubing and fittings
(See advertisement on page 103)

Creative Plastics Corp., Stoneybrook, Long Island, N. Y.

Crescent Engineering & Research Co., 5440 N. Peck Rd. El Monte, Calif.
Electromechanical transducers; control systems

Crescent Insulated Wire & Cable Inc., P. O. Box 850 Trenton 5, N. J.
Single and "cabled" air and hydraulic tubing
(See advertisement on page 251)

Croname, Inc., 3701 Ravenswood Ave., Chicago 13, Ill.
Etched, plated circuits; ceramic decorated glass; embossed pattern metal

Crosby Co., 183 Pratt St., Buffalo 5, N. Y.

Crosby Steam Gage & Valve Co., 43 Kendrick St., Wrentham, Mass.
Safety and relief valves; gages; recorders; testers, and steam engine indicators

Crow Electri-Craft Corp., Div. of Universal Scientific Inc., 1102 Shelby St., Vincennes, Ind.

Crowell Mfg. Co., 319 Franklin Ave., Brooklyn 5, N. Y.

Crown Industrial Products Co., 713 Amsterdam St., Woodstock, Ill.
Electric Motor repair equipment; color code paints; design layout inks; rust inhibitors

Crucible Steel Co. of America, Box 1558, Pittsburgh 30, Pa.
Non-corrosive tubing; permanent magnets

Crystal Glass Tube and Cylinder Co., 7310 So. Chicago Ave., Chicago 19, Ill.
Heat resisting, precision hose and other forms of tubing
(See advertisemen on page 116)

Crystal Research Labs., Inc., 29 Allyn St., Hartford 3, Conn.
Capacitors; quartz products; filters; flats; frequency meters; signal generators; mirrors; oscillators; r-f. oscillators; vitreous silica; time interval apparatus; vibration pickups

Cubic Corp., 5575 Kearny Villa Rd., San Diego 11, Calif.

Cumberland Optical Co., 8422 Georgia Ave., Silver Spring, Md.

Cuno Engineering Co., 80 So. Vine St., Meriden, Conn.
Filters for air, gases and liquids

Cunningham, James Son & Co., Inc., 33 Litchfield St Rochester 8, N. Y.

Curtin & Co., W. H., P. O. Box 118, Houston, Tex.
Laboratory supplies

Curtis Development & Mfg. Co., 3242 North 33rd St., Milwaukee 16, Wis.
Terminal blocks and terminal block kits for control, panel, feed-through wiring; electrical & mechanical controls

Curtis Laboratories Inc., 2718 Griffith Park Blvd., Los Angeles 27, Calif.
Precision optical and photographic equipment, optical components and systems

Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N. J.
Distortion eliminating voltage regulator; capacitor electrometer; thermal time-delay relays; magnetic amplifiers

Custom Components, Inc., P. O. Box 248, Caldwell, N. J.

Custom Line Panel Corp., 1379 East Linden Ave., Linden, N. J.
Design, fabrication, piping and wiring of instrument control panels, including pneumatic, electric, and hydraulic systems

Custom Lubricant Company, 743 Dwight Way, Berkeley 10, Calif.
Instrument lubricants; special oils

Custom Scientific Instruments, Inc., 541 Devon Street, Kearny, N. J.
Testing machines for flooring, textiles, etc.; microtomes; extensometers; thickness gages

Cuthbert Co., Inc., 502 Thorpe Bldg., Minneapolis, Minn.
Scientific grain, seed and food testing equipment

Cutler-Hammer Inc., 315 N. 12th St. Milwaukee 1, Wis.
Electric motor control; safety switches; motor driven valve operators; gas calorimeters; gas mixing and stabilizing control, resistors

Cybertronic Corp. of America, 134-8th St., Upland, Chester, Pa.
Automatic controls systems and components

Cyclohm Div., Howard Industries, 1760 State St., Racine, Wis.
Fractional-horsepower motors

Cyclone Motor Corp., 5-17 46th Rd., Long Island City 1, N. Y.

Cyclotron Specialties Co., Moraga 6, Calif.
Radioactivity equipment

D

D & R Limited, 402 Gutierrez St., Santa Barbara, Calif.
Electronic test instruments; electric wave filters; magnetic amplifiers; high-frequency alternators; motor alternators

Daco Instrument, Tillary & Prince Sts., Brooklyn 1, N. Y.
Aviation and military instruments

Dage Electric Co., Inc., 67 N. 2nd Street, Beech Grove, Ind.
Radio frequency connectors

Dage Television Div., Thompson Products Inc., W. 10th St., Michigan City, Ind.
TV cameras; components

Dahl Co., Inc., George W., Tupelo St., Bristol, R. I.
Automatic and hand-operated control valves.
(See advertisement on page 241)

Daigger & Co., A., 159 W. Kinzie St., Chicago 10, Ill.
Laboratory supplies

Dale Instruments Div., Electronic Development Co., 2002 N. 51st St., Omaha 4, Neb.
Electrical instruments

Dale Products, Inc., Box 136, Columbus, Nebr.
Standard resistors; production resistors; potentiometers; instrument dials and pointers; electronic assemblies

Dales Co., Franklin, 180 East Mill St., Akron, Ohio

Dalmo Victor Co., Div. of Textron Inc., Belmont, Calif.
Airborne radar and microwave scanners, components and sub-assemblies; servo-hydraulics; microwaves; and aerial refueling

Dalmotor Co., 1375 Clay St., Santa Clara, Calif.
Motors; servomotors

Damol Corp., 541 Land Title Bldg., Philadelphia 10, Pa.
Automatic safety cut-off devices with alarm features for automatically-controlled process protection

Danbury-Knudsen, Inc., Danbury, Conn.

Daniel Orifice Fitting Co., Inc., 3346 Union Pacific Ave., Los Angeles 23, Calif.
Orifice flowmeters and fittings; piston controlled check valves

Daniels, Inc., C. R., Daniels, Md.
Protective textile covers for electronic instruments

Dano Electric Co., Box 709, Winsted, Conn.

Darley & Co., W. S., 2810 Washington Blvd., Chicago 12, Ill.
Pipe locators

Datascan Inc., 48 Notch Rd., Little Falls, N. J.
Delayed signal memory devices.

Datran Electronics Div., Mid-Continent Mfg. Inc., 3615 Aviation Blvd., Manhattan Beach, Calif.
Aircraft and industrial-process instrumentation; telemetering systems; multi-channel automatic recording systems

Daven Co., 530 W. Mt. Pleasant Ave., Route 10, Livingston, N. J. Attenuators; calibrating equipment for electrical instruments; resistors; potentiometers; switches

Davenport Manufacturing Co., 1713 N. Ashland Ave., Chicago 22, Ill. Electronic and electrical test equipment

Davidson Associates, 730 Fifth Ave., New York 19, N. Y. Centrifuges; balances; laboratory apparatus

Davidson Mfg. Co., 2223 Ramona Blvd., W. Covina, Calif. Precision optical testing instruments; auto-collimeters; interferometers; precision divided circles; large optics

Davies Labs., Div., Minneapolis-Honeywell Reg. Co., 10721 Hanna St., Beltsville, Md.
Tape data recording and analysis components and systems for analog or digital applications

Davis Instruments Div., Davis Emergency Equipment Co., Inc., 47 Halleck St., Newark 4, N. J.
Continuous gas analysis instruments
(See advertisement on page 111)

Davis Regulator Co., 2541 S. Washtenaw Ave., Chicago 8, Ill.
Valves

Daystrom, Inc., 200 Elmora Ave., Elizabeth, N. J.

Daystrom Instrument Div., Archbald, Pa.

Daystrom Nuclear Div., P. O. Box 347, West Caldwell, N. J.

Daystrom Pacific Corp., 11150 LaGrange Ave., Los Angeles 25, Calif.
Precision single and multi-turn wire wound potentiometers; miniature and sub-miniature trimming potentiometers

Daystrom Systems, Div. of Daystrom, Inc., 5640 LaJolla Blvd., LaJolla, Calif.

Dayton Instrument, Inc., 404 Winston Ave., Dayton 3, Ohio
Analog to digital converters, pressure transducers

Daytronic Corp., 216 S. Main St., Dayton 2, Ohio
Industrial-process and dimensional control systems and components; scales; testing equipment

Dearborn Electronic Labs., Inc., 231 S. LaSalle St., Chicago 4, Ill.
Capacitors for filter applications; power supplies; filters

Dearborn Gage Co., 22038 Beech St., Dearborn, Mich.
Chromium plated gage blocks

Dearborn Glass Co., 6600 S. Harlem Ave., Bedford Park, Ill.

Dearborn Scientific Co., 1228 W. Kinzie St., Chicago 22, Ill.
Optical flats

Decker Aviation Corp., 1361 Frankford Ave., Philadelphia 25, Pa.
Dimensional, electrical and radar instrumentation

Defender Instr. & Reg. Co., Boody, Ill.
Pressure, temperature, and vacuum instruments; automatic controls

Defiance Engrg. & Microwave Corp., P. O. Box 488, Beverly, Mass.
Production, research and development of antennas and microwave components

DeJur-Amsco Corp., Northern Blvd. at 45th St., Long Island City 1, N. Y.
Photoelectric exposure meters, electrical, radio and photographic products

Del Electronics Co., 41 N. McQuesten Pkwy., Mt. Vernon, N. Y.
High-voltage transformers and power supplies
(See advertisement on page 129)

Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester, N. Y.

Delmhorst Instrument Co., Cedar St., Boonton, N. J.
Moisture detectors

Deltron, Inc., 2905 N. Leighgow St., Phila. 33, Pa.
Regulated power supplies; control equipment

Deltronic Corp., 1507 Riverside Drive, Los Angeles 31, Calif.
Relays

Deming Indicator Co., 1016 Acorn Dr., Dayton 9, Ohio
Test indicators and dial indicators

DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
Microwave test equipment and components

Denison Engineering Co., 1160 Dublin Rd., Columbus, Ohio
Presses and controls

Denison Mfg. Co., R. B., 102 St. Clair Ave., N. W., Cleveland 13, Ohio
Machine tool limit switches—snap action; one, two, and three isolated circuits, double break; Nema 12 enclosures

Denver Fire Clay Co., P. O. Box 5510, Denver 17, Colo.
Specialized industrial control equipment for power plants and processing industries; laboratory specialties

Derbyshire, Inc., F. W., 157 High St., Waltham 54, Mass.
Instrument lathes; micromills; chucks, etc.

Deringer Metallurgical Corp., 8123 Monticello Ave., Skokie, Ill.
Electrical contacts; cold headed specialties

Desco Mfg. Co., 551 W. Glendale Blvd., Glendale, Calif.
Electrical inspection and testing equipment

Design & Development Labs., P. O. 696, Peekskill, N. Y.
Scientific instruments

Design Tool Corp., 80 Washington St., New York 6, N. Y.
Automatic lead formers; benders; straighteners, and tapers

Dessau Co., Maurice S., 589 5th Ave., New York 17, N. Y.
Industrial diamond tools; wheels; powder; lapping compound

Detect-O-Ray, 2622 N. Halsted St., Chicago 14, Ill.
Photoelectric counters

Detecto Scales, Inc., 540 Park Ave., Brooklyn 5, N. Y.
Scales

Detectolab, Inc., 3300 Newport Blvd., Santa Ana, Calif.
Radioactivity instrumentation; amplifiers; counters; precision power supplies

De-Tec-Tronic Corporation, 2512 N. Halsted Street, Chicago 14, Ill.
Photoelectric instruments

Detroit Controls Corp., Research Div., 1650 Broadway, Redwood City, Calif.
High speed sampling commutating telemetering switches

Detroit Testing Machine Co., 9390 Grinnell St., Detroit 13, Mich.
Testing machines

Deutronics, Inc., 221 N. Hermitage Ave., Trenton 8, N. J.

Deutsch Co., 6345 Regent St., Huntington Park, Calif.

Devco Engineering, Inc., P. O. Box 387 Caldwell, N. J.
Panelboards; graphic systems; control systems

Development Engineering Co., 9 Cross St., Norwalk, Conn.
Environmental test equipment.

Development Industries, Box 7053, Cranwood Sta., Cleveland 28, Ohio
Differential-pressure gages

Dexter Machine Products, Inc., Box 328, Chelsea, Mich.
Instrument gears

DeZurik Shower Co., Sartell, Minn.
Consistency regulators; weir-type flowmeters; control valves

Dialight Corp., 60 Stewart Ave., Brooklyn 37, N. Y.
Sub-miniature indicator lights; edge lighting assemblies; pilot light assemblies for neon and incandescent lamps; oil tight, rugged indicator lights
(See advertisement on page 158)

Diamond Mfg. Corp., 7 North Ave., Wakefield, Mass.

Diamond Power Specialty Corp., P. O. Box 415, Lancaster, Ohio
Industrial television; blowers; water gages and columns

Diatron Co., 5411 Pocahontas, Bellaire, Texas
Electrical and electronic instruments

Dice Co., J. W., 16 Highwood Ave., Englewood, N. J.
Testing instruments for metals; tramp metal detectors; microhm meters; electronic micrometers
(See advertisement on page 93)

Dickson Co., 7420 Woodlawn Ave., Chicago 19, Ill.
Furnace controls; chart recorders

Diehl Mfg. Co., Electrical Div. of the Singer Mfg. Co., Finderne Plant, 1116 Finderne Ave., Somerville, N. J.
Fans; motors; servomotors; components .

Diehl Mfg. Co., Finderne Plant, 1116 Finderne Ave., Somerville, N. J.
A-c and d-c servomotors; d-c motor-generator sets; d-c and a-c precision tachometers; precision resolvers and phase-shifters

Dielectric Products Engineering Co. Inc., Raymond, Maine.
Coaxial transmission lines; fittings; harmonic filters; side band filters; coaxial swtches; compressor dehydrators AM-FM and TV

Dietert Co., Harry W., 9330 Roselawn Ave., Detroit 4, Mich.
Laboratory supply house

Dietz Co., Henry G., Coral Designs Division, 12-16 Astoria Blvd., Long Island City 2, N. Y.
Automatic timers; panels; switchgear; manometers; nameplates
(See advertisement on page 227)

Dietz Design and Manufacturing Co., Grandview, Missouri
Inductance components

Dietzgen Co., Eugene, 2325 N. Sheffield Ave., Chicago 14, Ill.
Drafting and surveying instruments

Diffraction Products, Inc., 1400 S. 14th Ave., Maywood, Ill.
Diffraction gratings

Digitac, Inc., 420 S. Beverly Drive, Beverly Hills, Calif.
Electrical impulse counters

Dilectron Div., Gudeman Co. of Calif., 2669 S. Myrtle Ave., Monrovia, Calif.
Ceramic capacitors; ferrites; pulse transformers; delay lines; blocking oscillators; magnetic amplifiers

Dillon & Co., W. C., 14620 Keswick St., Van Nuys, Calif.
Traction dynamometers, tensile machines, thermometers
(See advertisement on page 217)

Dimco-Gray Co., 207 E. 6 St., Dayton 2, Ohio
Plastic knobs and handles; timers and stop-clocks; snap-slide fasteners

Dinion Coil Co., P. O. Drawer D, Caledonia, N. Y.

Disston Div., Henry, H. K. Porter Co., Inc., Philadelphia 35, Pa.
Tools; tool steel

Disston & Sons, Inc., Henry, Tacony Station, Philadelphia 35, Pa.

Distillation Products Industries, Rochester 3, N. Y.
High vacuum pumps, low vapor pressure fluids and auxiliary equipment

Dit-Mco, Inc., Electronics Div., 911 Broadway, Kansas City 5, Mo.
Electrical and electronic inspection and testing systems; components; automatic circuit analyzer

Dittmore & Freimuth Co., 2517 E. Norwich Ave., Milwaukee 7, Wisconsin
Electrical instruments, counters; cable splicers

Division Lead Co., 7742 W. 61st Place, Summit, Ill.
Metal & alloy products; solder; solder preforms

Dixon Inc., William, 32-42 E. Kinney St., Newark 1, N. J.
Optical and mechanical micrometers; jeweler's balances and tools; soldering irons; industrial brushes
(See advertisement on page 228)

Dmeter Manufacturing Co., Inc., 22-24 Larkin Plaza, Yonkers 2, N. Y.
Precision wire wound resistors

DoAll Company, 254 N. Laurel, Des Plaines, Ill.
Gages; Brinnell hardness testers; precision tools

Doerr Electric Corp., Cedarburg, Wis.

Dole Valve Co., 6201 Oakton St., Morton Grove, Ill.

Dollinger Corp., 11 Centre Park, Rochester 3, N. Y.
Instrument air filters

Donner Scientific Co., 888 Calinda St., Concord, Calif.
Electrical instruments and automatic-control systems; aircraft instruments; analog computers

Doolittle Radio, Inc., 7421 Loomis Blvd., Chicago 36, Ill.
Frequency monitor

Dorber Co., 7741 W. Palatino Ave., Chicago 31, Ill.
Dissolved oxygen analyzer

Dormeyer Industries, 3418 Milwaukee Ave., Chicago 41, Ill.
Precision coils; solenoids; transformers

Dormitzer Electric & Manufacturing Co., Inc., 50 Hadley St., Cambridge, Mass.
Electrical instruments; speed control systems; light sources; relays; intercoms; electronic components

Dorr-Patterson Div. of Miller Laundry Machinery Co., 8341 Lyndon Ave., Detroit 2, Mich.
Physical testing machines

Douglas Instrument Labs., 176 Norfolk Ave., Boston 19, Mass.
Electrical and electronic instruments

Douglass Automatic Controls Co., 5949 Clara St.; Bell Gardens, Calif.
Excess-temperature cut-off for hot water systems

Douthitt Corp., 650 W. Baltimore Ave., Detroit 2, Mich.
Process cameras and diaphragm control for cameras

Dow Chemical Co., Building 294E Midland, Mich.
Magnesium alloys; plastic tubing

Dow-Corning Corp., P. O. Box 592, Midland, Mich.
Silicone fluids and greases for high and low temperature lubrication of instruments; stop-cock grease; high vacuum grease; lens cement; liquid dielectrics; diffusion pump oils

Downing Crystal Co., 191 Shaffer Ave., Westminister, Md.

Drafte Co., Cochranton, Pa.
Drafting machines

Drage Products, 406-32nd St., Union City, N. J.
Viscosity measurement and automatic-control equipment; cryptometers; laboratory baths

Dragon Engineering Co., 5817 S. Central Ave., Los Angeles 11, Calif.
High pressure needle valves; regular and panel mounting globe valves; gage glass fittings; swage nipples; pipe fittings
(See advertisement on page 239)

Drake Manufacturing Co., 1713 W. Hubbard St., Chicago 22, Ill.
Dial & signal lights
(See advertisement on page 158)

Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif.
Regulated dc power supplies; magnetic amplifiers

Driaire, Inc., 132 S. Main St., South Norwalk, Conn.
Humidity and dehydration instruments and specialties

Driver Co., Wilbur B., 1875 McCarter Highway, Newark 4, N. J.
Precision alloys for electronic, electrical, mechanical, chemical applications

Driver-Harris Co., P. O. Drawer 31, Harrison, N. J.
Thermocouple and resistance wire

Drying Systems, Inc., 1800 Foster Ave., Chicago 40, Ill.

DuBois Engrg. Co., 6805 McCook Ave., Hammond, Ind.
Control panels; desks; electrical enclosures; control systems

Du-Co Ceramics Co., Box 587, Butler, Pa.
Pyrometer tubes; insulators; ceramic materials

Ducommun Co., M., 580 Fifth Ave., New York 36, N. Y.
Coil-spring stopwatches

DuKane Corp., St. Charles, Ill.
Electronic equipment; amplifiers; sound systems; intercom; audio-visual equipment

Du Maurier Co., Elmira, N. Y.
Prismatic & Galilean binoculars; telescopes; microscopes; optical benches

DuMont-Airplane & Marine Instruments, Inc., 15 William St., New York 5, N. Y.

DuMont Labs., Inc., Allen B., 750 Bloomfield Ave., Clifton, N. J.
Cathode-ray oscillographs; cathode-ray tubes; associated electronic equipment; television control; studio transmitting equipment; multiplier phototubes, signal generators

Dunbar Glass Corp., Dunbar, W. Va.

Duncan Electric Mfg. Co., Lafayette, Ind.
Ac and dc watthour meters; service and switchboard types; portable test meters, appliance meters and instrument transformers

Dunlee Corp., 4558 W. Congress St., Chicago 24, Ill.
X-ray tubes

Duotone Co., Inc., Locust St., Keyport, N. J.

DuPont de Nemours & Co., E. I., N. W. Corner 10th & Market Sts., Wilmington 98, Del.
Fluorescent screens and chemicals

Durakool, Inc., 1010 N. Main St., Elkhart, Ind.
Mercury switches; timer relays

Duraloy Co., Scottdale, Pa.

Duramark, Inc., 2 Secatoag Ave., Port Washington, L. I., N. Y.

Durant Manufacturing Co., 1925-1929 N. Buffum St., Milwaukee 1, Wis.
Counting and measuring machines with stroke and rotary counters; lineal measuring units; predetermined, electric counters

Durez Plastics Div., Hooker Electromechanical Co., Niagara Falls, N. Y.

Dusenbury, John, 150 Pine St., Montclair, N. J.
Designers and builders of nautical instruments, and special mechanical devices

Dwyer Mfg. Co., F. W., P. O. Box 373, Michigan City, Ind.
Inclined and pointer-type draft gases; manometers; Pitot tubes; flowmeters; pressure switches
(See advertisement on pages 137, 170)

Dyna-Empire, Inc., 1075 Stewart Ave., Garden City, L. I., N. Y.
Earphones; microphones; electronic components; jet engine parts; hydromechanical devices
(See advertisement on page 32)

Dynalysis Development Laboratories, Inc., 11941 Wilshire Blvd., Los Angeles 25, Calif.
High precision computing, instrumentation equipment

Dynamatic Div., Eaton Mfg. Co., 3307 14th Ave., Kenosha, Wis.
Variable speed drives, torque measuring equipment

Dynamic Controls Co., 1955 Massachusetts Ave., Cambridge 40, Mass.
Electronic equipment; control systems; regulated d-c supplies

Dynamic Gear Co., Inc., 20 Merrick Rd., Amityville, L. I., N. Y.
Fine-pitch instrument gears

Dynamic Instrument Co., 28 Carleton St., Cambridge 42, Mass.
Strain gage transducers
(See advertisement on page 166)

Dynamics Research Associates, Div., Universal aMtch Corp., 401 Paul Ave., Ferguson 21, Mo.
Magnetic amplifiers; control components; power supplies; inverters; converters; automatic control systems.

Dynamics Instrumentation Co., Div. Alberhill Corp., 1118 Mission St., South Pasadena, Calif

Dynapar Corp., P. O. Box 82, Northfield, Ill.
Digital electronic counters and transducers to sense, measure, and control, rate, time frequency, RPM, linear speed, or position

E

E-C Apparatus Co., 23 Haven Ave., New York 32, N. Y.
Electroconvection apparatus; countercurrent extractors; electrophoresis paper; power supplies

E & S Optical Co., Oak Ridge Rd., Oak Ridge, N. J.
Optical components

E S C Corporation, 534 Bergen Blvd., Palisades Park, N. J.
Delay lines; pulse transformers; radio noise filters

E-T-A Products Co. of America, 5085 N. Elston Ave., Chicago 30, Ill.
Miniature circuit breakers; starter winding relays; temperature sensitive and time delay relays; overload relays

E&W Optical Co., 2406 E. Hennepin Ave., Minneapolis 13, Minn.
Optical parts

Eagle Signal Corp., 202 20th St., Moline, Ill.
Industrial control devices; traffic signal controllers and sign flashers

Eastern Aircraft Products Corp., Orange, N. J.
Self sealing, zero leakage, quick disconnect valves

Eastern Air Devices, Inc; 385 Central Ave; Dover,
Fractional-hp. motors; synchronous motors
N. H.
Fractional-hp motors; synchronous motors

Eastern Etching & Mfg. Co., Grape and Front Sts., Chicopee, Mass.

Eastern Industries, Inc., 100 Skiff St., Hamden 14, Conn.
Traffic signaling devices. hydraulic pumps; hydraulic servomotors

Eastern Precision Resistor Corp., 675 Barbey St., Brooklyn 7, N. Y.
Decade boxes; heat flow instrumentation

Eastern Specialty Co., 3617 N. 8th St., Philadelphia 40, Pa.
Watthour meter testing equipment and accessories

Eastman Kodak Co., 343 State St., Rochester 4, N. Y.
Photographic equipment for laboratories, spectrographic, X-ray, etc.

Eastman Oil Well Survey Co., P. O. Box 408, Long Beach 1, Calif.
Underground surveying equipment

Eaton-Dikeman Co., Mt. Holly Springs, Pa.
Laboratory apparatus

Eaton Manufacturing Co., Reliance Div., 25 Charles Ave., S.E., Massilon, Ohio

Eberbach & Son Co., 200 E. Liberty St., Ann Arbor, Mich.
Laboratory apparatus

Ebert Electronics Corp., 212-26 Jamaica Ave., Queens Village 28, L. I., N. Y.
(See advertisement on page 194)

Eby, Inc., Hugh H., 4700 Stenton Ave., Philadelphia 44, Pa.
Relays and radio parts

Eckert-Mauchly Div. Remington Rand Inc., 2300 W. Allegheny Ave., Philadelphia 23, Pa.
Computers

Eckel Valve Co., 1419 W. First St., San Fernando, Calif.
Miniature solenoid valves

Eclipse Fuel Engineering Co., 1100 Buchanan St., Rockford, Ill.
Furnaces, boilers and their automatic ocontrols; valves; accessories

Eclipse-Pioneer Div., See Bendix Aviation Corp.

Eco Engineering Co., 12 New York Ave., Newark 1, N. J.
Corrosion-resistant pumps

Edcliff Instruments, 1711 So. Mountain Ave., P. O. Box 307, Monrovia, Calif.
Precision linear potentiometers; linear accelerometers; angle of attack-yaw meters; pendulum position indicators; precision potentiometer test equipment

Edelmann & Co., E., 2332 Logan Blvd., Chicago 47, Ill.
Automotive test instruments

Eder Instrument Co., Inc., 2293 N. Clybourn Ave., Chicago 14, Ill.
Inspection devices for internal inspection: transformer or battery powered lights; inspection rods; internal Inspectroscopes (rigid, flexible); magnifiers; mirrors; pocket microscopes
(See advertisement on page 211)

Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.
Research-type cameras; xenon discharge tubes; oceanographic instruments

Edin Co., Inc., 207 Main St., Worcester 8, Mass.
Oscillographs, amplifiers, recorders, galvanometers
(See advertisement on page 152)

Edison, Inc., Thomas A., Instrument Div., West Orange, N. J.
Temperature monitoring systems for aircraft and industry; aircraft instruments: temperature indicators, pressure indicating and telemetering systems; thermal and sensitive relays; sealed thermostats

Edmund Scientific Corp., 101 E. Gloucester Pike. Barrington, N. J.
Telescopes; microscopes; spectroscopes; optical components

Edna Lite Optical Co., Inc., 200 N. Water St., Peekskill, N. Y.

Edroy Products Co., 480 Lexington Avenue, New York 17, N. Y.
Magnifying products

Edwards Co., Inc.; 90 Connecticut Ave., Norwalk, Conn.
Electrical signaling; communication equipment.

Edwards, L. V., 32 Irving Place, Rockville Centre, N. Y.
Smoke-density instruments and alarms

Edward Valves, Inc., 1200 W. 145th St., E. Chicago, Ind.
Control valves

Eichner Instruments, L. C., 19 Sebargo St., Clifton, N. J.

Elcor, Inc., 4235 W. North Ave., Chicago 39, Ill.
Fractional hp., geared, ungeared, synchronous, capacitor, and dc motors

Eisele & Co., 400 First Ave., N. Nashville 3, Tenn.

Eitel-McCullough, Inc., San Bruno, Calif.
Electrical and electronic instruments, and components

Eitzen Co., Louis C., 17 W. 60th St., New York 23, N. Y.
Extensometers

El Dorado Electronics Co., 1401 Middle Harbor Rd., Oakland 20, Calif.
Audio amplifiers; tuners

El Mec Labs., 730 Boulevard, Kenilworth, N. J.
Process timers

El Products Corp., P. O. Box 41, Kingsbridge Station, New York 63, N. Y.
D-c miniature motors
(See advertisement on page 143)

El Ray Motor Co., 11747 Vose St., N. Hollywood, Calif.
Miniature and fractional-hp and related assemblies, including gear trains and filters; generators, inverters, and servomotors

El-Tronics, Inc., Penn Ave., Mayfield, Penna.
Nuclear and electronic instrumentation; radioactivity standards and supplies

Elco Sales Co., M St. below Erie Ave., Phila. 24, Pa.
Printed circuit connectors and sockets

Eldema Corp., 9844 Remer St., El Monte, Calif.
Panels, edge lighted; pilot lights

Electomic Mechanisms, Inc., P.O. Box 1156, Greenwich, Conn.
Powdered iron clutches brakes; electromechanical amplifiers; torque controls

Electra Mfg. Co., 4051 Broadway, Kansas City 11, Mo.
Carbon resistors; W-blade switches; relays; solenoids; automotive voltage regulators; ceramic disc capacitors.

Electric Auto-Lite Co., Industrial Thermometer Div., Toledo 1, Ohio
Pressure and vacuum gages; speedometers; tachometers and thermometers
(See advertisement on page 42)

Electric Design & Mfg. Co., P. O. Box 237, Burlington, Iowa
Electrical indicating instruments

Electric Eye Equipment Co., 1938 E. Fairchild St., Danville, Ill.
Automatic inspection devices

Elect. Heat Control Apparatus Co., 507 Fifth Ave., Room 1066, New York 17, N. Y.
Laboratory ovens

Electric Hotpack Co. Inc., Melrose St. at Cottman Ave., Philadelphia 35, Pa.
Designers and manufacturers of controlled temperature equipment; ovens; furnaces; sterilizers; baths; constant temperature rooms for laboratories, pilot plants and plants

Electric Indicator Co., Camp Ave., Springdale, Conn.
Synchronous motors; position indicators; level controls; signaling devices

Electric Motors & Specialties, Inc., King & Hamsher Sts., Garrett, Ind.

Electric Regulator Corp., Pearl St., Norwalk, Conn.
Current and frequency regulators

Electric Soldering Iron Co., Deep River, Conn.
Soldering irons, guns; solder pots

Electric Sorting Machine Div., Mandrel Industries, Inc., 3530 Eastern Ave., S.E., Grand Rapids 8, Mich.
Precision photoelectric color sorting machines; pneumatic separators

Electric Specialty Co., 175 South St., Stamford, Conn.

Electric Speed Indicator Co., 12234 Triskett Road, Cleveland 11, Ohio
Precision electric tachometers and remote position indicators; windspeed and direction instruments

Electric Switch Corp., 1302 E. 11th St., Columbus, Ind.
Metallic mercury switches.

Electric Tachometer Corp., 68th and Opland Sts., Philadelphia 42, Pa.
Speed indicators and recorders; electric and mechanical counters

Electrical Industries, Inc., Div. of Philips Electronics, Inc., Murray Hill, N. J.
Glass-to metal seals

Electrical Utilities Co., 2429 St. Vincent Ave., La Salle, Ill.

Electrical Windings, Inc., 2015 N. Kalmar Ave., Chicago 39, Ill.
Transformers; chokes; reactors; coils; solenoids

Electricoil Transformer Co., Westerly Rd., Ossining, N. Y.

Electrimatic Div., Marsh Corp., J. P., 3501 Howard St., Skokie, Ill.
Automatic control valves and controls; regulating valves—pressure, temperature, and electrical actuation

ElectroData Div., 460 Sierra Madre Villa, Pasadena, Calif.
Electronic data processing systems; general purpose digital computers; magnetic tape systems; punched card systems; paper tape input/output systems

Electro Development Co., 14701 Keswick St., Van Nuys, Calif.
Sub-miniature rotary switches 1 to 3 pole, 2 to 4 gangs; slip rings, slip ring and brush assemblies; plastic products
(See advertisement on page 195)

Electro Development Corp., 6006 W. Washington Blvd., Culver City, Calif.

Electro Devices, Inc., 580 Main St., Wilmington, Mass.
Semiautomatic miniature toroid coil winder

Electro Devices, Inc., 4025 Easton Ave., St. Louis 13, Mo.
Annunciators; laboratory switchboards; test equipment; power supplies

Electro Engineering Products Co., Inc., 609 West Lake St., Chicago 6, Ill.
Instrument and servomechanism motors; signal generators, h-f apparatus

Electro-Flex Heat, Inc., 83 Woodbine St., Hartford 6, Conn.
Electrical flexible heaters, plane shapes, minimum thickness, operate to 450°F; standard or custom designs for any power density, voltage, resistance

Electro-Impulse Labs., 208 River St., Red Bank, N. J.

Electro Instruments, 3796 Rosecrans St., San Diego 10, Calif.
Digital instruments; automation systems; transistorized plug-in modules

Electro Measurements, Inc., 7524 S.W. Macadam Ave., Portland 1, Oregon
C-R-L impedance bridges and accessories; rheostats; potentiometers

Electro-Mec Laboratory, Inc., 47-51 33rd St., Long Island City 1, N. Y.
Precision potentiometers

Electro Mechanical Div., General Riveters, Inc., 785 Hertel Ave., Buffalo 7, N. Y.
Hysteresis, fluid-magnetic, and electrically actuated friction clutches

Electro-Mechanical Instrument Co., 812 Chestnut St., Perkasie, Pa.
Electrical instruments

Electro Mechanical Specialties Co., Inc., 1016 N. Highland Ave., Angeles 38, Calif.
Balanced armature relays, vibration resistant, for use in airborne, missile, radar and communication applications

Electro-Mechanical Research, Inc., 64 Main St., Ridgefield, Conn.
Electrical and electronic instruments and components

Electro-Mechano Co., 261 E. Erie St., Milwaukee 2, Wis.
High-speed precision drilling machines

Electro-Medical Laboratory, Inc., South Woodstock, Vt.
Neurological and allied medical instruments and general electronic apparatus
(See advertisement on page 71)

Electro-Miniatures Corp., 1060 Elm Ave., Ridgefield, N. J.
Slip ring assemblies; brush assemblies; commutators; rotary switches

Electro Products Laboratories, 4501 N. Ravenswood Ave., Chicago 40, Ill.
Transducers; magnetic pickups; proximity pickup systems; dynamic micrometer; d-c power supplies
(See advertisement on page 139)

Electro Pulse, Inc., 11811 Teale Street, Culver City, Calif.
Pulse instrumentation; electronic waveform generators; automatic sweep, counter, and pulse code systems; digital indicating equipment

Electro-Snap Switch and Mfg. Co., 4218 W. Lake St., Chicago 24, Ill.
Snap action switches

Electro Switch Corp., 167 King Ave., Weymouth 88, Mass.
Switches

Electro Tec. Corp., South Hackensack, N. J.
Slip rings; commutators; brush assemblies; selector switches; miniature relays

Electro-Tech Equipment Co., 308 Canal St., New York 13, N. Y.
Electrical and electronic parts and equipment distributor

Electro-Technical Labs., Div., Mandrel Industries, Inc., 5134 Glenmont Dr., P. O. Box 13243, Houston, Texas
Electromagnetic velocity seismometers; reflection-refraction amplifier; magnetic tape recording systems; recording oscillographs

Electro-Technical Products Div., Sun Chemical Corp., 113 E. Centre St., Nutley 10, N. J.
Insulation; custom surface and impregnated coatings; low pressure laminates

Electro-Voice, Inc., Buchanan, Mich.
Audio equipment; electro-acoustic devices

Electrocon Corp., 219 Sunrise Highway West, Freeport, N. Y.
Vibration measuring instruments

Electromath Corp., 42-14 Greenpoint Ave., Long Island City 4, N. Y.

Electromotive Mfg. Co., Willimantic, Conn.

Electronic Apparatus Corp., 116 E. Jackson Blvd., Elkhart, Ind.
Mercury relays and switches

Electronic Associates, Inc., Long Branch Ave., Long Branch, N. J.
Analog computing equipment; variplotters; six-channel recorders; oscilloscopes; electronic digital voltmeters
(See advertistment on page 76)

Electronic Communications, Inc., Industrial St., Teterboro, N. J.
Electronic communications; navigations systems, components; aircraft components

Electronic Computer Div., Underwood Corp., Alberton Ave., Albertson, L. I., N. Y.

Electronic Computer Div., Underwood Corp., Albertson

Electronic Control Corporation, 1573 E. Forest Ave., Detroit 7, Mich.
Flaw detectors; photoelectric controls; radiation pyrometers; torque controls

Electronic Control Systems, Inc., 2138 Westwood Blvd., Los Angeles 25, Calif.
Automatic and remote control systems

Electronic Controls, Inc., 4521 Chestnut St., Philadelphia 39, Pa.
Electronic controllers and timers for counting, lighting, etc.

Electronic Designs, Inc., 28 School St., Yonkers, N. Y.
Vacuum-tube voltmeters; precision wire-wound resistors

Electronic Development Lab., 4463 N. Harlem Ave., Chicago 31, Ill.
Electronic Apparatus

Electronic Devices, Inc., 429—12th St., Brooklyn 15, N. Y.

Electronic Engineering Associates, Ltd., 1040 Brittan Ave., San Carlos, Calif.
Dynamic pressure measuring equipment

Electronic Engineering & Services Co., Inc., 104 W. Jefferson St., Falls Church, Va.

Electronic Fabricators, Inc., 682 Broadway, New York City 12, N. Y.
Plastic film capacitors

Electronic Instrument Co., Inc., 33-00 Northern Blvd., Long Island City, N. Y.
Electronic test equipment; high-fidelity kit.

Electronic Mfg. Co., 140 S. Second St., Harrisburg, Pa.
Oscillators, voltmeters

Electronic Measurements Co., Inc., Lewis St. & Maple Ave., Eatontown, N. J.
A-c regulators; power amplifiers; power supplies

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.
Oscilloscopes; tube testers; radio and TV set analyzers; volt-ohm-milliammeters

Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.

Electronic Parts Mfg. Co., Inc., 508-25th St., Union City, N. J.

Electronic Rectifiers, Inc., 2102 Spann Ave., Indianapolis 3, Ind.
Laboratory and industrial power supplies; rectifiers

Electronic Research Associates, Inc., 67-69 E. Centre St., Nutley 10, N. J.
Electrical instrumentation; transistor circuits; power supplies

Electronic Signal & Instrument Co., 139-05 Archer Ave., Jamaica 35, N. Y.
Electronic scales; dynamic overweight detectors; traffic research scales; portable scales; platform scales

Electronic Specialty Co., 5121 San Fernando Blvd., Los Angeles, Calif.
Miniature relays; time delay relays; missile fuses; under and over-voltage; and under and over-frequency sensors; r-f systems and components; flashers; specialty devices

Electronic Transformer Co., 70 Washington St., Brooklyn 1, N. Y.
Fixed and adjustable transformers

Electronic Tube Corp., 1200 E. Mermaid Lane, Philadelphia 18, Pa.
Amplifiers; oscilloscopes; stress-strain instruments

Electronics Corp. of America, 77 Broadway, Cambridge 42, Mass.
Industrial photoelectric controls including counting equipment; electronic timers and special electronic controls; smoke controls

Electronics Development Laboratory, 336 National Rd., Dayton 3, Ohio
Catheter manometers; spark light sources

Electron-Radar Prods., 4806 W. Chicago Ave., Chicago 44, Ill.
Vacuum gages; photocells and phototubes; watthour meter testers; alarm systems; bridges; components

Electronics, Inc., 127 Sussex Ave., Newark 3, N. J.
Gas-filled and grid-control rectifier tubes

Electrons, Inc., 127 Sussex Ave., Newark 3, N. J.
Thyratron and rectifier tubes

Electrosig Corp., 239 Main St., Stamford, Conn.
Voltage regulators; automatic timers; transformers; rectifiers; laboratory apparatus; electroplating solution testers

Electrosonic Engineering Co., 2120 Pontius Ave., Los Angeles 25, Calif.
Mercury, sensitive and subminiature relays; antennas

Electyme Motor Products Corp., River Woods Rd., Deerfield, Ill.
Clocks and timers

Electro-Service Co., 480 Johnson Ave., Brooklyn 37, N. Y.
Electrical components

Elematic Equipment Corp., 6731 So. Chicago Ave., Chicago 37, Ill.
Pyrometers; flowmeters; thermocouples

Elgin National Watch Co., Elgin, Ill. Electronics Div., 2435 N. Naomi St., Burbank, Calif.
Relays; microphones; sound powered telephones; audio equipment

Elgin Tool Works Inc., 1770 Berteau at Ravenswood Ave., Chicago 13, Ill.
Precision machine tools.

Ellis Associates, Box 77, Pelham, N. Y.
Preamplifiers; strain-time recorders; calibrating equipment
(See advertisement on page 204)

Ellis & Sons Inc., G. D., 4034 N. American St., Dept. G. Philadelphia 40, Pa.
Instrument packaging

Ellison Draft Gage Co., 548 W. Monroe St., Chicago 6, Ill.
Manometers; draft gages; calorimeters; furnace control systems; portable gas analyzers; inclinemeter tubes; pitot tubes; draft instruments; pitot tubes

Ellwood Ivins Steel Tube Works, Oak Lane, Philadelphia 26, Pa.

Elsbert Mfg. Co., Inc., 910 W. Lake St., Chicago 7, Ill.

Emarco Corp., P. O. Box 615, Far Hills, Sta., Dayton 9, Ohio.
Signaling system and components

Emerson & Cuming, Inc., 869 Washington St., Canton, Mass.
Casting resins; foams; adhesives; microwave absorbers; impregnants; surface coatings; laminating resins.

Emerson Apparatus Co., 171 Tremont St., Melrose, 76, Mass.
Calorimeters; material testing equipment

Emery Company, A. H., Pine St., New Cannaan, Conn.
Hydraulic and pneumatic weighing systems; load cells; tank weighing equipment.
(See advertisement on page 249)

Empire Devices, Inc., Amsterdam, N. Y.
High frequency apparatus

Empire Electronics Co., 74 Cortlandt St., New York 7, N. Y.
Electronic equipment distributor

Empire State Labs., 2608 Merrick Rd., Bellmore, L. I., N. Y.
Precision gear and instrument assemblies; mechanical components
(See advertisement on page 112)

Endevco Corp., 161 E. California St., Pasadena, Calif.
Dynamic measuring instrumentation: accelerometers; pressure pickups; force gages with associated electronics for indicating, telemetering and recording

Engelhard, Inc., Charles 850 Passaic Ave., East Newark, N. J.
Industrial instruments

Engineered Electronics Co., 506 E. First St., Santa Ana, Calif.
Packaged circuit plug-in units; dc regulated power supplies; analog computers

Engineered Magnetics, Div. of Gulton Mfg. Corp., 11818 Teale St., Culver City, Calif.
Power supplies; regulators; magnetic amplifiers; frequency controls

Engineered Products Co., P. O. Box 118, Flint 4, Mich.
Precision fuel nozzles, injectors.

Engineering Development Labs., Inc., P. O. Box 149, Newport, R. I.

Engineering Enterprises, Inc., 112 Ring Bldg., 1200 18th St., N. W., Washington 6, D. C.
Galvanometric and multi-styli recorders; printed circuit boards.

Engineering Laboratories, Inc., 610-24 E. 4th St., Tulsa 3, Okla.
Seismic exploration equipment; vibration detectors; petroleum engineering devices; signaling equipment

Engineering Research & Development Co., Addison, Ill.
Precision instruments—custom built

Engineers Specialty Div., Universal Engraving & Colorplate Co., 980 Elliott St., Buffalo 9, N. Y.
Optical comparators

Engis Equipment Co., 431 S. Dearborn St., Chicago 5, Ill.
Optical, electronic, mechanical gages; tools; diamond abrasive compounds; reciprocating hand-profiler; surface finish and roundness testing.

Engler Instrument Co., 250 Culver Ave., Jersey City 5, N. J.
Time registers, controllers and recorders; hub odometers; airspeed indicators

Enley Products, Inc., 1236 Broadway, Brooklyn 21, N. Y.
Demineralizers, ion exchange resins.

Enteco Industries, Inc., 610 Kosciusko St., Brooklyn 21, N. Y.
Light filters; polarizing filters; photographic lens attachments.

Environmental Equipment Co., 371 Linden St., Brooklyn, N. Y.
Environmental test equipment.
(See advertisement on page 101)

Epic Inc., 154 Nassau St., New York 38, N. Y.
Electrical instruments; vibration and temperature instruments; optical equipment

Eppley Laboratory Inc., 12 Sheffield Ave., Newport, R. I.
Standard cells; thermopiles, pyrheliometers; golay infrared detectors; precision dc measuring instruments
(See advertisement on Inside Front Cover, and 200)

EPR Special Products Corp., 675 Barbey St., Brooklyn 7, N. Y.
(See advertisement on page 152)

Epsco, Inc., 588 Commonwealth Ave., Boston 15, Mass.
Electrical and electronic instruments; flight test instruments; digital computing equipment
(See advertisement on page 90)

Eraser Co., Inc., 1060 S. Clinton St., Syracuse 4, N. Y.

Erb & Gray, 854 S. Figueroa St., Los Angeles 17, Calif.
Toolmaker's microscopes; laboratory supply house

Erco Div., ACF Industries, Inc., Riverdale, Md.
Dielectric heating equipment; laboratory ovens; gear and bearing test machines; lubricant evaluation equipment.

Ercona Corp., 551 Fifth Ave., New York 17, N. Y.
Optical measuring instruments; high fidelity audio equipment.

Erdco Engineering Corp., Westgate Dr. and Official Rd., Addison, Ill.

Erickson Specialty Co., 10 Cayuga St., P. O. Box 141, Cohoes, N. Y.
Solenoid valves

Ericsson Screw Machine Products Co., 25 Lafayette St., Brooklyn 1, N. Y.

Erie Resistor Corp., 644 West 12th St., Erie, Pa.
High frequency and molded resistors; capacitors

Eriez Mfg. Co., 1945 Grove Dr., Erie, Pa.
Permanent magnets

Ertel Engineering Corp., 9 Front St., Kingston, N. Y.
Asbestos dish, filters; stainless steel filters; hard rubber filters; mixers; stainless steel pumps.

Erwood, Inc., 1770 Berteau St., Chicago 13, Ill.
Sound and vibration instrumentation

Esco Products Co., Oak Ridge Rd., Oak Ridge, N. J
Dimensional gages and inspection equipment; optical instruments and components; light sources

Ess Instrument Co., 96 S. Washington Ave., Bergenfield, N. J.
Electronic instruments and controls.

Essex Electronics, Berkeley Heights, N. J.
Inductive electronic components

Essex Wire Corp., 1600 Wells Street, Fort Wayne, Ind.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis 6, Ind.
Electrical recording instruments, direct-writing, strip-chart type; pressure and vacuum recorders.
(See advertisement on page 54)

Eureka Manufacturing Co., 144 Britannia St., Taunton, Mass.

Eureka X-ray Tube Corp., 3240-58 N. Kilpatrick Ave., Chicago 41, Ill.
X-ray tubes

Evaporated Metal Films Corp., 147 E. State St., Ithaca, N. Y.
Mirrors, beam splitters

Ever Ready Thermometer Co., 88 Park Pl., New York 7, N. Y.
Calorimeters; thermometers

Everett Products, Inc., 50 Aleppo St., Providence, R. I.
Recording pens; electronic components; glass tubing

Everson Mfg. Co., 214 W. Huron St., Chicago 10, Ill.
Chemical feeders

Ewald Instruments, Box 124, Kent, Conn.
Welding equipment—tap welding

Exact Weight Scale Co., 944 West 5th Ave., Columbus 8, Ohio
Over-and-under weight scales and indicators for industrial purposes

Ex-Cell-O Corp., 1202 Oakman Blvd., Detroit 32, Mich.
High precision machine tools; threading and tapping tools

Excel Electric Service Co., 2113 S. Western Ave., Chicago 8, Ill.
Ground detectors; capacity relays

Excellex Electronics, Inc., 475 Chestnut Street, Cedarhurst, L. I., N. Y.
Terminal blocks; metal and plastic fabricated products

Excelsior Supply Co., 18 Letchworth St., Buffalo 13, N. Y.

Exline Engineering Co., 107 W. Second St., Tulsa 3, Oklahoma
Hydraulic, mechanical, and electromechanical instruments and controls for industry

F

F-R Machine Works, Inc., 26-12 Borough Pl., Woodside 77, N. Y.
Micro-wave test equipment.

Fafnir Bearing Co., 37 Booth St., New Britain, Conn.
Ball bearings.

Fairbanks, Morse & Co., 600 So. Michigan Ave., Chicago 5, Ill. Electronics Div., 1115-14th Ave., East Moline, Ill.
Scales; pumps; electrical generating plants

Fairchild Camera & Instrument Corp.:
Reconniassance Systems Div., Robbins Lane, Syosset, L. I., N. Y.
Industrial Camera Div., Robbins Lane, Syosset, N. Y.
Aerial cameras; aerial reconnaissance systems; oscilloscope cameras; high-speed motion analysis cameras

Electrical Products Div., 110 Main St., Burlington, Vt.
Fractional-hp motors

Fairchild Controls Corp., Components Div., 225 Park Ave., Hicksville, L. I., N. Y.
Potentiometers; pressure transducers; accelerometers

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Electronic cameras

Fairchild Recording Equipment Corp., 154 St. & 7th Ave., Whitestone, N. Y.
Magnetic tape recorders

Falcon Alarm Co., Inc., 243 Broad St., Summit, N. J.
(See advertisement on page 142)

Falcon Machine & Tool Co., Inc., 209 Concord Turnpike, Cambridge, Mass.
Miniature universal joints; couplings; speed reducers; running torque meters.
(See advertisement on page 113)

Falstrom Co., 92 Falstrom Ct., Passaic, N. J.
Steel instrument panels; panel board assemblies; cubicles; totally enclosed weather and vermin-proof instrument enclosures and steel cabinets

Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.
Tantalum; tungsten; molybdenum; columbium; electrical contacts selenium; silicon rectifiers; tantalum capacitors; special alloys

Farmer Electric Products Co., Inc., 2300 Washington St., Newton Lower Falls, Mass.
Automatic timers; relays; switches

Farnsworth Electronics Co., 3700 E. Pontiac St., Fort Wayne 1, Ind.
Guidance, control, and support instrumentation for missiles; airborne fire control and navigation radar; special purpose tube design and production; telemetering systems

Farnsworth Electronics Co., Pacific Div., 815 S. San Antonio Rd., Palo Alto, Calif.
Hermetically sealed individual terminals; multiple headers; plugs; pressure terminals; end seals; compression seals; custom seals; rotary instrument switches

Farrand Optical Co., Inc., 4401 Bronx Blvd., New York 70, N. Y.
Precision optics; spectrofluorometers; grating monochromators; photometers; electron microscopes; interference-filters; alignment telescopes; infrared systems; automation positioning

Farrand Optical Co., Inc., 4401 Bronx Blvd., New York 70, N. Y.
Scientific instruments

Farris Engineering Corp., 400 Commercial Ave., Palisades Park, N. J.
Spring-loaded safety and relief valves

Farris Flexible Valve Corp., 436 Commercial Ave., Palisades Park, N. J.
Manually and automatically operated valves

Farris Pickering Governor Co., 400 Commercial Ave., Palisades Park, N. J.
Speed regulators; pump controllers; control valves

Farris-Stacon Corp., 345 Commercial Ave., Palisades Park, N. J.
Automation controllers; valves

Fasco Industries, Inc., Motor Sales Div., P. O. Box 509, Rochester 2, N. Y.
Fractional-hp motors

Fassett Co., Inc., C. M., 21 W. Main Ave., Spokane 8, Wash.
Laboratory supplies

Fast & Co., John E., 3582 N. Elston Ave., Chicago 18, Ill.
Capacitors

Fawley-Brost Co., 111 N. Wacker Dr., Chicago 6, Ill.

Fecker, J. W., Inc., 6592 Hamilton Ave., Pittsburgh 6, Pa.
Optical instruments

Federal Bearings, Inc., Poughkeepsie, N. Y.

Federal Anti-Capacity Switch Corp., 1200 Niagara St., Buffalo, N. Y.
Anti-capacity switches

Federal Classifier Systems, Inc., 127 N. Dearborn St., Chicago 2, Ill.
Particle size classifiers

Federal Instrument Co., 14-02 Broadway, Long Island City 2, N. Y.
Resistors

Federal Machine & Welder Co., 1745 Overland Ave., N.E., Warren, Ohio
Resistance welding equipment

Federal Mfg. & Engrg. Corp., 211 Steuben St., Brooklyn 5, N. Y.
Microscopes

Federal Products Corp., 1144 Eddy St., Providence 1, R. I.
Precision measuring instruments

Federal Screw Products Inc., 3917 N. Kedzie Ave., Chicago 18, Ill.
Hardware for instrument manufacturing
(See advertisement on page 193)

Federal Shock Mount Corp., 1060 Washington Ave., New York 56, N. Y.
Vibration isolators; shockmounts; mounting bases

Federal Telephone and Radio Co., 100 Kingsland Road, Clifton, N. J.
Radio transmitting and direction finding equipment; transmitting tubes; field intensity meters

Federal Tool Engrg. Co., 1384 Pompton Ave., Cedar Grove, N. J.
Welding machines, and accessories

Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
Solders; fluxes; lead shielding

Feedback Controls, Inc., 899 Main St., Waltham 54, Mass.
Electrical and electronic instruments; control systems; computers

Feiler Engineering & Manufacturing Co., 8026 N. Monticello Ave., Skokie, Ill.
Electrical instruments

Fellows Gear Shaper Co., 78 River Rd., Springfield, Vt.
Gear checking machines; involute measuring machines

Felsenthal & Sons, C., 3500 N. Kedzie Ave., Chicago 18, Ill.
Radio and TV; refrigeration; computers and navigation instruments

Femco, Inc., Box 32, Irwin, Pa.
Carrier current communications; wired audio system; transmission of multiple controls and indications with carrier current or coded pulses.

Fenwal Inc., Fenwal Sales Office Bldg., Leland St., Ashland, Mass.
Industrial thermostats

Fenway Machine Co., 680 Davisville Rd., Willow Grove, Penna.
Drilling and drill grinding machines; power supplies

Ferguson Co., 814 Ridgely St., Baltimore 30, Md.
Laboratory supply house

Ferner Co., R. Y., [illegible] Pleasant St., Malden 48, Mass.
Precision instruments

Ferrara, Inc., 8106 W. 9 Mile Rd., Oak Park 37, Mich.
Automatic controllers; relays

Ferrier Engineering, 24 Benton St., Springfield, Mass.
Special instruments; test stands for automatic and diesel industries

Ferranti Electric, Inc., 30 Rockefeller Plaza, New York 20, N. Y.
Electrical instruments; digital data processing and control systems

Ferris Instrument Co., Boonton, N. J.
Laboratory and production testing equipment; radio noise and field strength meters and special electrical instruments

Fidelity Machine Co., 3906 Frankfort Ave., Philadelphia, Pa.
Abrasion testers

Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2900 N. 4th St., Philadelphia 33, Pa.
Automatic controllers, electrical instruments

Film Capacitors, Inc., 337 E. 139 St., New York 54, N. Y.
Fixed and variable capacitors

Filtors, Inc., 30 Sagamore Hill Dr., Port Washington, L. I., N. Y.
Subminiature relays

Filtron Co., Inc., 131-15 Fowler Ave., Flushing 55, L. I., N. Y.

Fineisen, A. R., 114-102 230th St., Cambria Heights, L. I. 11, N. Y.
Precision drilling and nutting machines; crystal electrodes; conductive paints; drill heads; hobs for fine pitch gears
(See advertisment on page 113)

Finn & Co., Inc., T. R., 200 Central Ave., Hawthorne, N. J.
Shock and vibration control equipment

Fischer & Porter Co., 775 Warminster Rd., Hatboro, Pa.
Industrial process instrumentation; water chlorination equipment; precision glass products; data handling equipment.

Fish-Schurman Corp., 68 Portman Rd., New Rochelle, N. Y.
Scientific instruments; optical, technical and scientific glass and porcelain
(See advertisement on page 102)

Fisher Governor Co., Marshalltown, Iowa
Gas distribution system instruments; level in indicators; recorders; transmitters; pressure controllers; valves.
(See advertisement on pages 30-31)

Oscar Fisher Co., Inc., 1000 N. Division St., Peekskill, N. Y.

Fisher-Pierce Co., 170 Pearl St., South Braintree, Mass.
Photoelectric controls; relays; timers

Fisher Radio Corp., 21-21-44 Drive, Long Island City 1, N. Y.

Fisher Research Laboratory 1961-63-65 University Ave Palo Alto, Calif.
Electromagnetic metal pipe and cable locators; sound leak detectors; pipe and sound detecting instruments; Geiger and scintillation counters

Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.
Laboratory appliances and reagent chemicals.

Fitzpatrick Electric Supply Co., 444 Irwin St., Muskegon, Mich.
Ductile bismuth wire
(See advertisement on page 250)

Fleischhauer & Son, F., 89-36 187 Place, Hollis, L. I., N. Y.
Instrument makers

Flexaust Co., 100 Park Ave., N. Y., 17 N. Y.
Flexible hose, duct, and tubing.

Flexonics Corp., 1309 S. Third Ave., Maywood, Ill.
Controlled bending of thin-wall metals.

Flight Research Inc., P. O. Box 1-F, Richmond 1, Va.
Photographic data recording instruments; automatic photographic exposure controllers; aircraft instruments; single crystal silicon.

Flow Corp., 85 Mystic St., Arlington 74, Mass.
Hot wire aneometers; micromanometers; electronic instruments; probes; metal crystals.
(See advertisement on page 106)

Fluke Mfg. Co., Inc., John, 1111 W. Nickerson St., Seattle 99, Wash.
Electrical and electronic instruments; power supplies

Fluor Corp., Ltd., Box 7030 East L. A. Branch, Los Angeles 22, Calif.
Pressure snubbers and pulsation dampers

Fonda Gage Corp., 200 Henry St., Stamford, Conn.
Gage blocks

Food Technology, Inc., 5903 NW Highway, Chicago 31, Ill.
Temperature and humidity chambers; testing apparatus

Force & Co., Wm. A., 216 Nicholas Ave., Brooklyn 8, N. Y.

Ford Engineering Co., 129 E. "A" St., Upland, Calif.
Precision variable resistors

Ford Instrument Co., Div. of Sperry-Rand Corp., 31-10 Thomson Ave., Long Island City 1, N. Y.
Analog and digital computers; navigational, weapons control systems and equipment.

Formica Co., Cincinnati 32, Ohio
Laminated plastic (formica) rods, sheets and tubes

Forro Scientific Co., 833 Lincoln St., Evanston, Ill.
Laboratory, industrial-process, dimensional, and nuclear instrumentation; components

Foster Engineering Co., 835 Lehigh Ave., Union, N. J.
Control valves; flow tubes

Fox Valley Instrument Co., Route 1, Highway 27, Cheboygan, Mich.
Industrial and automatic service instruments

Foxboro Co., 468 Neponset Avenue, Foxboro, Mass.
Instruments for the measurement and control of industrial process variables
(See advertisement on pages 26-27)

Frangible Discs, Inc., 57 Railroad Ave., Penns Grove, N. J.
Safety discs; fuse plugs

Franklin Electronics Inc., East 4th St., Bridgeport, Penna.
Instrumentation and data reduction equipment; mobile broadcast receivers f.m.

Franklin Mfg. Co., A. W., 175 Varick St., New York 14, N. Y.

Fraser Development Laboratory, P. O. Box 73, Huntington Station, N. Y.
Fluxometer for measuring magnetic flux in gauss

Frederick and Associates, Carl L., 4630 Montgomery Ave., Bethesda 14, Md.
Technical reference service

Fredericks Co., George E., Ann St., & Philamont Rd., Bethayres, Pa.
Glass Instruments and apparatus

Freed Inc., J. Melvin, Perkasie, Pa.
Flat glass products

Freed Transformer Company, Inc., 1718 Weirfield St., Brooklyn 27, N. Y.
Transformers; reactors; filters, magnetic amplifiers, toroid inductors; laboratory test equipment; electronic counters
(See advertisement on pages 86, 187)

Fretco Incorporated, 406 N. Craig St., Pittsburgh 13, Pa.
Receiving antennas and accessories; photo diodes; semi-conductor photo diodes; scintillation crystals; open lead-in wire; optical crystals

Frick Co., Waynesboro, Pa.
Float valve controls; electric controls; refrigerating and air conditioning machinery

Friden Calculating Machine Co., 2350 Washington Ave., San Leandro, Calif.
Automatic calculators; adding machines; automatic billing machines; integrated data processing equipment; automatic writing and composing machines

Friedrich & Dimmock, Inc., Lincoln Ave., Millville, N. J.
Laboratory apparatus

Friez Instrument Div., Bendix Aviation Corp., Towson 4, Md.
Temperature and humidity controls; gas and stoker controls; damper motors; electrical relays; temperature and humidity indicators and recorders; psychrometers; draft gages; anemometers; CO_2 analyzers

Fruengel Inc., Frank, Broadmoor Drive, Dayton 9, Ohio
Electrical and electronic test instruments; stroboscopes

Fuel Watchman, 77-29 138 St., Flushing, L. I., N. Y.

Fuess, Inc., 39 W. 60th St., New York 23, N. Y.
Scientific instruments

Fuller Co., 124 Bridge St., Catasauqua, Pa.
Bulk material level controllers

Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Box 400 Knoxville 1, Tenn.
Temperature, pressure, vacuum, regulators and controls

Furnas Electric Co., 1134 McKee St., Batavia, Ill.
Electric motor controls

Fusion Engineering, 17291 Roseland Ave., Cleveland 12, Ohio
Solders and soldering equipment

Fusite Corporation, 6000 Fernview Ave., Cincinnati 13, Ohio

Futurecraft Corp., 1717 North Chico Ave., El Monte, Calif.
High-pressure pneumatic, liquid-oxygen, and corrosive-liquid solenoid valves; regulators.

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G. & G. Precision Works, Inc., 5-33 Forty-eighth Ave., Long Island City 1, N. Y.
Mechanical optical and electrical precision instruments

G-M Laboratories, Inc., 4300 N. Knox Ave., Chicago 41, Ill.
Servo motors; motor generators; tachometers

G.-M. Mfg. Co., 50 W. 3 St., New York 12, N. Y.
G. P. S. Instrument Co., Inc., 811 Boylston St., Boston 16, Mass.

G. R. S. Corp., 6533 N. Olmstead Ave., Chicago 31, Ill.

G-V Controls Inc., 28 Hollywood Plaza, East Orange, N. J.
Relays; switches

Gabriel Electronics Div., Gabriel Co., 135 Crescent Rd., Needham Heights 94, Mass.
Communications; microwave; radar antennas; drive pedestals and controls

Gadgets, Inc., 3629 N. Dixie Drive, Dayton 4, Ohio
Airborne and ground instruments; testing chambers

Gaertner Scientific Corp., 1208 Wrightwood Ave., Chicago 14, Ill.
Precision, scientific, optical, and measuring instruments for use in industrial, research, educational and gage laboratories; inspection and tool and die departments
(See advertisement on page 150)

Gage Co., 29 N. McCamly St., Battle Creek, Mich.
Charts, gages, features for optical comparators; profile gages.

Galland-Henning Nopak Div., 2740 S. 31st St., Milwaukee 46, Wis.

Gallien, & Son, R. P., 220 W. 5th St., Los Angeles 13, Calif.
Instrument lathes and tools
(See advertisement on page 130)

Gamewell Co., 1238 Chestnut St., Newton Upper Falls 64, Mass.
Precision potentiometers

Gap Instrument Co., 101 Albany Ave., Freeport, N. Y.
Gap step transmission systems; mechanical integrators; differentials

Gar Electrical Instrument Corp., 92-15 172nd St., Jamaica, L. I., N. Y.

Gar Precision Parts, Inc., 40 Ludlow St., Stamford, Conn.

Garde Manufacturing Co., 588 Eddy St., Providence 3, R. I.
Insulated terminals; terminal boards; allied components

Garden City Instruments, Inc., 931 Sherman Ave., Evanston, Ill.
Temperature and humidity instruments

Gardner Laboratory, Inc., 5521 Landy Lane, Bethesda 14, Md.
Testing instruments
(See advertisement on page 224)

Gardner Pad Co., Inc., River St., Wolfeboro, N. H.

Garlock Packing Co., 402 Main St., Palmyra, N. Y.
Mechanical packings; gaskets; plastic products

Garlynn Engineering Co., 755 Pennsylvania Ave., San Francisco 7, Calif.
Hydrological and surveying instruments

Gas Appliance Specialties Co., 32-37 56th St., Woodside, New York, N. Y.
Gas regulators

Gast Mfg. Corp., Box 117, Benton Harbor, Mich.
Vacuum pumps

Gates & Co., Inc., Geo W., Hempstead Pike & Lucille Ave., Franklin Square, L. I., N. Y.
Visible and ultraviolet light sources

Gates Electronic Co., 2090 Barnes Ave., New York 62, N. Y.
D-c power supplies and dc test equipment for electroplating equipment.

Gates Mfg. Co., Quincy, Ill.

Gatti, Inc., Aurele M., 524 Tindall Ave., Trenton 9, N. J.
Mounted or unmounted sapphire and ruby bearings for instruments; special shape sapphire wearparts

Gaydon Co., 561-3946 Ellington, Western Springs, Ill.
Automatic controllers; alarm systems

Gear Supply Co., 880 El Camino Real, Belmont, Calif.
Gears; splines; machined components; gear assemblies

Geartronics Corp., 50 Nashua St., Woburn, Mass.
Gears, gear systems

Geier & Bluhm, Inc., 594 River St., Troy, N. Y.
Spirit levels, mounted, unmounted; cohesion testers; specialized inclinometers; instrument parts
(See advertisement on page 124)

Gelber & Sons, Inc., S., 5806 N. Lincoln Ave., Chicago 45, Ill.
Balancing machines; pumps

Gem Instrument Mfg. Co., 6523 Euclid Ave., Cleveland 3, Ohio
Dial indicators

Gems Company, 93 Market Square, Newington, Conn.
Flow, level, and pressure sensing devices

Genales, Andres, 29 Second Ave., Nyack, N. Y.
Toolroom test indicators

General Alloys Co., 405 First St., South Boston, Mass.

General Aniline & Film Corp., 270 Park Ave., New York 17, N. Y.

General Automatic Corp., 12 Carlton Ave., Mountain View, N. J.
Electromagnetic relays

General Biological Supply House, Inc., 8200 S. Hoyne, Chicago 20, Ill.
Biological laboratory supplies

General Bronze Corp., 711 Stewart Ave., Garden City, L. I., N. Y.
UHF waveguide systems; waveguide test components; radar; scatter communications; radio telescope antennas and systems

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
Switches; cement tester; spark plug tester

General Ceramics Corp., Keasbey, N. J.

General Chemical Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.

General Control Co., 1200 Soldiers Field Rd., Boston 34, Mass.
Electrical switches; control units; timers

General Controls Co., 801 Allen Ave., Glendale 1, Calif.
Automatic pressure, temperature, level and flow controls

General Crystal Co., Burlington, Iowa

General Devices, Inc., P. O. Box 253, Princeton, N. J.
Remote-control systems; flight-test equipment; switches

General Electric Co. (GE), 1285 Boston Ave., Bridgeport 2, Conn.
Rectifiers and switches

General Electric Co., (GE), Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y.
(See advertisement on Front Cover)

General Electric Co. (GE), Chemical & Metallurgical Div., 1 Plastics Ave., Pittsfield, Mass.
Silicone materials

General Electric Co., (GE) Clock & Timer Dept., Ashland, Mass.

General Electric Co., (GE) Components Dept., Auburn, N. Y.
Electronic components

General Electric Co., (GE) Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn.

General Electric Co., (GE) Electronic Components Div., 1 River Rd., Schenectady 5, N. Y.
Cathode-ray, receiving, power tubes

General Electric Co. (GE), Electronics Div., Electronics Park, Syracuse, N. Y.
Oscillographs; tube analyzers; frequency instruments and crystals; nuclear measuring instruments; power supplies; closed circuit television

General Electric Co., (GE) General Purpose Control Dept., Bloomington, Ill.
Industrial motor control.

General Electric Co. (GE), Instrument Dept., 40 Federal St., West Lynn, Mass.
Electrical and electronics instruments; industrial-process instruments and components; aviation instruments; laboratory instruments

General Electric Co., (GE) Laminated Products Dept., Coshocton, Ohio

General Electric Co., (GE), Lamp Div., Nela Park, Cleveland 12, Ohio
Incandescent and glow lamps

General Electric Co. (GE), Lamp Wire and phosphors Dept., 1331 Chardon Rd., Cleveland 17, O.
Tungsten, molybdenum and cathode ray tube phosphors; tungsten and molybdenum products available as powder, rod, wire, sheets, and fabricated parts

General Electric Co. (GE), Metallurgical Products Dept., 11177 E. 8 Mile Rd., Detroit 32, Mich.
Carboloy cemented carbides; Alnico permanent magnets

General Electric Co., (GE) Silicone Prods. Dept., Mechanicville Rd., Waterford, N. Y.

General Electric Co., (GE) Specialty Electronic Components Dept., W. Genessee St., Auburn, N. Y.

General Electric Co. (GE), Textolite Dept., Coshocton, Ohio

General Electric Co. (GE), Tube Dept., Bldg. 3, C.A.R.T., 3001 Cambell Rd., Schenectady 5, N. Y.
Electron tubes for receiving, transmitting and power service; cathode-ray tubes

General Electric (GE), X-Ray Dept., 4855 Electric Ave., Milwaukee 1, Wis.
Medical, dental and industrial X-ray apparatus, accessories and supplies

General Industries Co., Elyria, Ohio
Electric motors for phonographs, gear trains; a-c and d-c voltage.

General Etching & Mfg. Co., 3070-3082 W. Grand Ave., Chicago 22, Ill.

General Industries Co., Elyria, Ohio
Fractional-hp motors

General Instrument Co., Box 7154, Indianapolis 18, Ind.
Automatic control systems; electrical and mechanical instruments

General Instrument Corp., F. W. Sickles Div., P. O. Box 330, Chicopee, Mass.

General Laboratory Supply Co., P. O. Box 2607 Paterson, N. J.
Laboratory apparatus and supplies

General Magnetic Corp., 1001 Erwin Ave., Detroit 34, Mich.

General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.
Magnetic modulators; amplifiers; voltage regulators; servo control systems

General Motors Corp., Delco Appliance Div., 391 Lyell Ave., Rochester I, N. Y.
(See advertisement on page 9)

General Mills, Inc., Mech. Div., 1620 Central Ave., Minneapolis 13, Minn.
Industrial, aircraft, testing and military instruments; telemetering and control systems

General Photo Products Co., Inc., General Photo Bldg., Chatham, N. J.
Dry and wet photocopy equipment and supplies

General Physical Laboratory, 509 Fifth Ave., New York 17, N. Y.
Special light sources

General Plate Div., Metals & Controls Corp., Attleboro, Mass.
Solid and clad, precious and base metals; thermostat metals; electrical contacts; industrial metals

General precision Lab., Inc., 63 Bedford Rd., Pleasantville, N. Y.
Airborne navigation systems; broadcast, industrial, institutional and military television equipment

General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
Oscillators; impedance standards and measuring equipment; voltmeters; motor controls; stroboscopes

General Regulator Corp., 165 Broadway, New York 6, N. Y.
Electric and pneumatic combustion control systems; steam desuperheaters; hydraulic control systems for aircraft test facilities

General Scientific Corp., 5151 West 65th St., Chicago 38, Ill.
Lenses; mirrors; optical parts & systems; photoelectric cells

General Scientific Div., Columbia Machine & Die Co., 12017 Vose St., North Hollywood, Calif.

General Scientific Equipt. Co., 2700 W. Huntington St., Philadelphia 32, Pa.
Automatic water stills; laboratory instruments and accessories

General Test Equipment Co., 101 Windsor Pl., Syracuse 10, N. Y.
Pen size radio signal source; special apparatus

General Tire & Rubber Co., Wabash, Ind.
Shock mountings

General Transformer Co., 18240 Harwood Ave., Homewood, Ill.

General Transistor Corp., 130-11 90th Ave., Richmond Hill 18, N. Y.
Transistors; rectifiers; diodes; transistor test sets

General Tungsten Mfg. Co., Inc., 502-23rd St., Union City, N. J.

General Ultrasonics Co., 67 Mulberry, Hartford 3, Conn.
Ultrasonic equipment; instrument cleaning equipment

Genisco Inc., 2233 Federal Ave., Los Angeles 64, Calif.
Precision test equipment; centrifuges; vibration equipment; oscillating tables; accelerometers; pressure pickups

Genzlinger, Inc., R. G., Neshaminy, Pa
Amplifiers; control systems; ultrasonic equipment

Geophysical Instrument Co., Div. Georator Corp., Manassa, Va.
Electrical and electronic balances; radioactivity instrumentation

Georator Corporation, Manassas, Virginia
Geophysical instruments; ac and dc generators

Geotechnical Corp., 3712 Haggar Drive, Dallas 9, Texas
Manufacturers of instruments and components for geophysical, industrial and research applications
(See advertisement on page 194)

Gerber Scientific Instrument Co., 162 State St., Hartford 1, Conn.
Analog computers; computing scales

Gerlin Corp., P. O. Drawer 307, Avon, N. J.

Germanow-Simon Machine Co., Inc., 408 St. Paul St., Rochester 3, N. Y.
Gages; instruments; household and industrial dial-type thermometers; die making machines; surface grinders

Gertsch Products, Inc., 3211 So. La Cienega Blvd., Los Angeles 16, Calif.
Frequency standards; frequency meters; filters; voltage dividers; vacuum tube voltmeters

Giannini & Co., G. M., 918 E. Green St., Pasadena 1, Calif.
Airborne transducers; gyro instruments; air data computers; digital data recording systems; industrial automation equipment; precision potentiometers; stepping motors

Giannini Datex Div., 1307 S. Myrtle Ave., Monrovia, Calif.
Digital data handling recording systems and equipment

Gibson Electric Co., Box J528, Delmont, Penna.
Electrical contacts of silver, silver alloys; palladium; nickel; of tungsten, copper, molybdenum, cadmium-oxide, graphite, tungsten-carbide

Gilbert & Barker Mfg. Co., West Springfield, Mass.
Tank gages; automatic samplers; pumps

Gilman Engineering & Mfg. Corp., 300 W. Eastern Ave., Janesville, Wis.

Gilmore, E. R., Box 5718, Homewood St., Pittsburgh 8, Pa.
Gas leak stethoscopes

Gilmore Industries, Inc., 5713 Euclid Ave., Cleveland 3, Ohio
Measuring systems; data handling systems

Gisholt Machine Co., 1245 E. Washington Ave., Madison 10, Wis.
Balancing machines; manual or automatic turrett lathes; single spindle automatic lathes; superfinishing machine

Gits Bros. Mfg. Co., 1846 S. Kilbourn Ave., Chicago 23, Ill.
Lubricating devices; mechanical shaft seals

Glaser Enterprises, Inc., 6226 S. Western Ave., Los Angeles 47, Calif.
Lightweight pressure gauges, direct drive

Glass Engineering Laboratories, Inc., 601 O'Neill Ave., Belmont, Calif.
Laboratory apparatus; ultra-speed centrifuges; heat exchangers

Glass Instruments, Inc., 2285 E. Foothill Blvd., Pasadena, Calif.
Technical glassblowing; scientific glass instruments; glass-to-metal sealing; laboratory apparatus
(See advertisement on page 115)

Glass Products Co., 6911 S. Chicago Ave., Chicago, Ill.

Glass Specialty Co., 600 Schenck Ave., Brooklyn 7, N. Y.
Glass cutting to specification; lenses, gage and cover glass

Gleason-Avery Inc., 45 Aurelius St., Auburn, N. Y.
Fractional-hp motors

Glenco Corp., 212 Durham St., Metuchen, N. J.

Glengarry Equipt. Corp., Bay Shore, N. Y.

Glo-Brite Products, Inc., 6417 N. California Ave., Chicago 45, Ill.

Globe Industries, Inc., 1784 Stanley Ave., Dayton 4, Ohio
Aircraft instrument testing equipment; aircraft interval timing instruments; aircraft photo equipment; automatic control instruments

Globe Phone Mfg. Corp., 2 Linden St., Reading, Mass.
Pipe locating equipment; leaky valve locators; hearing aids; secret phone or listening equipment for government investigating agencies

Globe Tool & Engrg. Co., 5051 Kitridge Rd., Dayton 4, Ohio
Dynamic balancing equipment

Glogau & Co., Inc., 1912 W. Birchwood, Chicago 26, Ill.
Calipers

Glowmeter Corp., 37 Franklin St., Buffalo 2, N. Y.
Condensed indicating warning system with quantitative displays; qualitative warning signal system; alarm-signal photorecorder

Goe Engineering Co., Box 22004 219 S. Mednik Ave., Los Angeles 22, Calif.
Terminal lugs; panel handles; insulated feed-thrus; insulated standoffs; shaft locks

Goerz American Optical Co., C. P., 317 East 34th St., New York 16, N. Y.
Photographic lenses, optical prisms and flats, and other optical units to specification

Gogan Machine Corp., 1440-54 E. 55 St., Cleveland 3, Ohio
Automatic hardness testers

Gold Seal Mfg. Co., 1223 W. Kenzie St., Chicago 22, Ill.

Goldak Co., Inc., 1544 W. Glenoaks Blvd., Glendale 1, Calif.
Surveying instruments; pipe locators; leak detectors

Golden-Anderson Valve Specialty Co., 1232 Ridge Ave., Pittsburgh 33, Pa.
Altitude control valves; pressure regulating valves; hydraulic operated valves
(See advertisement on page 240)

Good, Inc., James, Susquehanna Ave. & Martha St., Philadelphia 25, Pa.

Goodrich Co., B. F., 500 South Main St., Akron 18, Ohio
Belting; hose; packing; industrial rubber products

Goodyear Aircraft Corp., 1210 Massillon Rd., Akron 15, Ohio
Electronic computers; flight test and fire control instruments

Goodyear Tire & Rubber Co., Inc., Akron 16, Ohio
Aircraft ice-warning equipment

Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
Pyrometers; metallurgical testing machines; thermocouples; thermocouple wire; lead wire; insulators

Gordon Enterprises, 5362 N. Cahuenga Blvd., No. Hollywood, Calif.
Aerial photographic and photogrammetric equipment, instruments and instrumentation

Gordon Machine & Tool Co., Inc., Ruan & Tackawanna St., Phila. 24, Pa.
Thermocouples; thermocouple wells

Gordos Corporation, 250 Glenwood Ave., Bloomfield, N. J.
Rectifier bulbs; charger bulbs; mercury switches; photocells

Gormac Products, Inc., 933 Twelfth St., Racine, Wis.

Gorman Manufacturing Corp., 2240 Sepulveda Blvd., Los Angeles 64, Calif.

Gorn Electric Co., Inc., 845 Main St., Stamford, Conn.
Pressure, float flow switches; miniature, and electrical

Gorton Machine Co., George, 1321 Racine St., Racine, Wis.
Pantographs; die and mold duplicators; milling machines; screw machines; cutter grinders

Gorrell & Gorrell, 336 Old Hook Rd., Westwood, N. J.
Stock timers; operation recorders; and instrument drives

Goslin Electric & Manufacturing Co., Div. of Goslin Corp., 2921 Olive St., Burbank, Calif.
Transformers; filter reactors; charging reactors; voltage regulators; electronic sub-assemblies; transmitting and receiving equipment

Gotham Audio Development Corp., 2 W. 46th St., New York 36, N. Y.
Amplifiers; audio equipment

Gotham Instruments Div., American Machine & Metals, Inc., 233 Broadway, New York 7, N. Y.
Indicating dial and recording thermometers

Gotham Scientific Co., 106 Water St., New York 5, N. Y.
Laboratory supplies

Gould Co., J. D., 4707 Massachusetts Ave., Indianapolis 18, Ind.
Electrically-operated valves

Gould Laboratories, P. O. Box 216, Pitman, N. J.

Gove's Sons, Hartley, 10 Howard St., Vineland, N. J.

Gow-Mac Instrument Co., 100 Kings Road, Madison, N. J.
Gas chromatography, gas purity and gas mixing instruments, thermal conductivity type, including—sensing elements for operation to 200°C
(See advertisement on page 110)

Graf-Apsco Co., 5868 Broadway, Chicago 40, Ill.
Optical instruments and components; surveying and drafting instruments

Graflex Inc., 154 Claressa St., Rochester 8, N. Y.
Scientific cameras

Grain Laboratory Equipment Inc., Long Lake, Minn.
Moisture meters; agricultural instruments; germination cabinets

Gramer-Halldorson Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
Transformers: instrument, power, adjustable, phasing, regulating

Grammes Co., L. F., 384 Union St., Allentown, Pa.

Grant Gear Works, 154 W. 2nd St., Boston, Mass.
Precision gears

Grant Pulley & Hardware Corp., High St., West Nyack, N. J.

Graphik Circuits, Div. of Cinch Mfg. Co., 200 S. Turnbull Canyon Rd., La Puente, Calif.
Production; design; drafting; artwork; development; prototyping; fabricating; mechanical assembly; electrical assembly; encapsulating of printed circuits

Graphite Metallizing Corp., 1050 Nepperhan Ave., Yonkers 53, N. Y.
Bearings; bushings; brushes; contacts

Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
Kymograph and oscilloscope cameras

Graton & Knight Company, Inc., 356 Franklin St., Worcester, Mass.
Leather cases and products for instruments, cameras, etc.
(See advertisement on page 25)

Gray Instrument Co., 200 E. Church Lane, Philadelphia 44, Pa.
Scientific instruments
(See advertisement on page 160, 187)

Graydon Smith Products Corp., 52 Commonwealth Ave., West Concord, Mass.
Position-sensitive transducers; indicating amplifiers

Grayhill, 561 Hillgrove Ave., LaGrange, Ill.
Switches; insulators; test clips

Green Instrument Co., 385 Putnam Ave., Cambridge 39, Mass.
Pantograph engraving machinery; cutter grinders; rotary tables and related equipment
(See advertisement on page 155)

Green Instruments, Inc., Henry J., 1191 Bedford Ave., Brooklyn 16, N. Y.
Fortin type mercurial barometers; indicating and/or recording instruments for temperature, humidity, precipitation, wind velocity and wind direction
(See advertisement on pages 60, 119)

Green Rectifier Co., 1-10 Thirtieth St., Fairlawn, N. J.
D-c power supplies; motor speed controls; clutches; brake magnets; electro-chemical and arc power cubicles; diffusion pump fluids; instrumentation

Greenfield Tap & Die Corp., Greenfield, Mass.
Machine shop gages

Greenleaf Mfg. Div., Mandrel Industries, Inc., 7814 Maplewood Industrial Ct., St. Louis 17, Mo.
Gyroscopes; gyro servo test tables; self-balancing strain gage systems; accelerometers; servo motors; airspeed indicators

Greenlee Co., Geo. H., 1514 W. Adams St., Chicago 7, Ill.

Greibach Instruments Corp., 212 Durham Ave., Metuchen, N. J.

Greiner Glassblowing Lab., 3604 E. Medford St., Los Angeles 63, Calif.
Manufacturers and distributors of glass aparatus and instruments for scientific research, industry and education
(See advertisement on page 114)

Greiner Co., Emil, 20-26 N. Moore St., New York 13, N. Y.
General laboratory equipment, glassware, chemicals; custom fabrication

Griebel Co., E., 8 Wayne St., Carbendale, Pa.
Thermometers; hydrometers; chemical and laboratory glassware

Gries Reproducer Corp., 1178 Beechwood Ave., New Rochelle, N. Y.
Zinc-Alloy die cast parts; thermoplastic molded parts

Grieve-Hendry Co., Inc., 1401-17 W. Carroll Ave., Chicago 7, Ill.
Laboratory ovens

Grigoleit Co., 746 E. North St., Decatur, Ill.

Grinnell Co., Inc., 260 W. Exchange St., Providence 1, Rhode Island
Control Valves

Griswold Mfg. Co., F. T., 315 W. Lancaster Ave., Wayne, Pa.
Optical instruments

Grobet File Co. of America, Carlstadt, N. J.

Grove Valve & Regulator Co., 6529 Hollis St., Oakland 8, Calif.
Pump governors; pressure reducing and back pressure regulators for gas or liquid
(See advertisement on page 172)

Gruen Watch Co., Norwood Div., Beech & Kenilworth Sts., Cincinnati 12, Ohio

Guardian Electric Mfg. Co., 1621 W. Walnut St., Chicago 12, Ill.
Ac and dc relays

Guardite Co., Div., of Amer. Marietta Co., 9535 South Cottage Grove., Chicago 28, Ill.

Gubelman Publishing Co., 100 E. Kinney St., Newark 5, N. J.
Recording charts and papers
(See advertisement on page 70)

Gulton Industries Inc., 212 Durham St., Metuchen, N. J.
Electronic; electromechanical and ultrasonic components; instruments and systems for control, processing, recording, telemetering

Gurley, W. & L. E., 514 Fulton St., Troy, N. Y.
Surveying instruments; meteorological instruments; paper testing instruments; angular measuring devices; special optical instruments, binary code discs; precision patterns on glass

Gustafson Mfg. Co., G. D., 29 E. Madison St., Chicago 2, Ill.
Instrument tools
(See advertisement on page 159)

Gustaveson, Inc., 8600 Chestnut St., Kansas City 30, Mo.
Switchboards; instrument panels; special control devices

Guthery Machine Tool Corp., 38-31 Crescent St., Long Island City 1, N. Y.
Traub single spindle automatic screw machines
(See advertisement on page 130)

Gyromechanisms, Inc., New York Ave. at Halesight, Huntington L. I., N. Y.
Gyros; voltage dividing resistors

Gyroscopics, Inc., 65 Rushmore St., Westbury, L. I., N. Y.
Floated gimbal single degree of freedom rate and integrating gyroscopes; accelerometers; integrators; servo amplifiers; pickoffs; torque generators; gyro motors; magnetic clutches

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H-B Instrument Co., Inc., American & Bristol Sts., Philadelphia 40, Pa.
Thermometers; hydrometers; remote control equipment; mercury plunger relays

HD Electric Co., 760 Osterman Ave., Deerfield, Ill
Split core ammeters; demand meters

H & H Thermostats, Inc., 682 Broadway, New York 12, N. Y.
Altimeters; recording thermometers; recorder ink for extreme temperatures

H. & H Machine Co., Noble & Jackson St., Norristown, Pa.
Electronic Parts

H.J.J. Co., P. O. Box 457, Los Gatos, Calif.
Instrument tools
(See advertisement on page 192)

H. & O. Co., 648 Saylor Ave., Elmhurst, Ill.

Hacker & Co., Inc., Wm. J., 82 Beaver St., New York 5, N. Y.
Microscopes; spectroscopes; melting-point apparatus; testing machines; optical components

Hadley Assoc., Inc., H. R., 41 Barlow St., Winooski, Vt.
Weighing equipment; automatic fillers; vacuum pumps

Hagan Chemicals & Controls, Inc., Hagan Bldg., Pittsburgh 30, Pa.
Combustion control equipment; flow meters; draft and pressure gages for low pressure gas and air measurements: recording, indicating and integrating
(See advertisement on page 4)

Hagen Mfg. Co., 202 20th St., Moline, Ill.
Synchronous motors; interval timers; impulse counters

Hager & Sons, E. F., 98-02 217th Lane, Queens Village 9, Long Island, N. Y.

Hain, Inc., 148 Green St., New York 12, N. Y.
(See advertisement on page 227)

Haines Designed Products Corp., 1840 Howell Ave., Dayton 7, Ohio
Photometers

Hairspring Vibrating Co., 406 32nd St., Union City, N. J.

Halax Corp., 17470 Shelbourne Way, Los Gatos, Calif.
Special bearings; aluminum components; component assemblies for aircraft electronics and avionics

Haledy Electronics Co., 57 William St., New York 5, N. Y.
Automatic timers; photoelectric control systems; synchroscopes; relays and switches

Hall-Barkan Instruments, Inc., 181 Marbledale Road, Tuckahoe 7, N. Y.
Instrument components

Hall Co., Gordon L., Old Lyme, Conn.
Assembly bins and racks

Hall Scott, Inc., 2200 S. Figueroa St., Los Angeles, Calif.

Hall Sonic Engineering Co., Inc., 2402 2nd St., Peru, Ill.

Hallamore Electronics Co., Brookhurst St. & Ana Freeway; Anaheim, Calif.

Halliburton Oil Well Cement Co., Duncan, Okla.
Oil well surveying instruments

Hallikainen Instruments, 1341 Seventh St., Berkeley, 10, Calif.
Analytical instruments for laboratory and continuous processes

Haloid Co., 2-20 Haloid St., Rochester 3, N. Y.
Photocopy equipment

Hamilton Mfg. Co., Two River, Wis.
Laboratory furniture

Hamilton Rubber Mfg. Corp., P. O. Box 361 Mead St., Trenton 3, N. J.

Hamilton Tool Co., 9th & Hanover, Hamilton, Ohio
Precision machinery

Hammarlund Mfg. Co., Inc., 460 W. 34th St., New York 1, N. Y.
Electrical and electronic remote-metering and remote-control systems; components

Hammel-Dahl Co., 175 Post Road, (Warwick), Providence 5, R. I.
Diaphragm control valves of all types for standard or special applications; positioners; pressure pilots; temperature pilots; other allied control equipment
(See advertisement on Inside Back Cover)

Hamner Electronics Co., Inc., P. O. Box 531, Princeton, N. J.
Nuclear spectrometers; dynamic voltage tracer; power supplies

Hand & Sons Co., John E., Atlantic & Washington Aves., Haddonfield, N. J.
Navigational instruments

Handley Electronics, Inc., 14758 Keswick St., Van Nuys, Calif.
Absolute or differential pressure transducers with potentiometer or electro-magnetic output; visual temperature indicating instruments

Handy & Hardman, 82 Fulton St., New York 38, N. Y.
Linear wire-wound, voltage divider, custom built and special printed circuit type potentiometers

Hankison Corporation, 951 Banksville Rd., Pittsburgh 16, Pa.
Condensing type compressed air filters; small-volume desiccant dehydrators for low flow or dead end air service to 6000 psig
(See advertisement on page 50)

Hanna Engineering Works, 1765 No. Elston Ave., Chicago 22, Ill.
Air hydraulic cylinders; control valves

Hannifin Corp., 1101 S. Kilbourn Ave., Chicago 24, Ill.

Hanovia Chemical & Mfg. Co., Electrical Division, 100 Chestnut St., Newark 5, N. J.
Quartz mercury arc lamps

Hansen Electronics Co., 7117 Santa Monica Blvd., Los Angeles 46, Calif.
Graphic circuits; tape resistors; components

Hansen Manufacturing Co., 4031 W. 150th St., Cleveland 11, Ohio
Quick disconnect couplings

Hansen Mfg. Co., Inc., Princeton, Ind.
Synchronous a-c timing motors; machines; clock movements

Hansen Co., Wm., 165 Silverbrook Ave., Niles, Mich.
Timers and clocks

Hanson-Gorill-Brian, Inc., 85 Hazel St., Glen Cove, N. Y.
Aircraft and aviation instruments

Harco Laboratories, Inc., 77 Olive St., New Haven, Conn.
Pressure and temperature primary sensing elements

Harder Co., Donald C., 3710 Midway Drive, San Diego 10, Calif.

Hardwick, Hindle, Inc., 40 Hermon St., Newark 5, N. J.
Resistors

Harris & Co., Arthur, 212 N. Aberdeen St., Chicago 7, Ill.

Harrison Labs., Inc., 45 Industrial Rd., Berkeley Heights, N. J.
Regulated power supplies; television equipment

Harris Manufacturing Co., 134 West 26th St., New York 1, N. Y.

Harrison Radio Corp., 225 Greenwich St., New York 7, N. Y.
Electrical and electronic instruments distributors

Harshaw Scientific Div., Harshaw Chemical Co., 1945 E. 97 St., Cleveland 6, Ohio
Laboratory supply house

Hart Mfg. Co., 110 Bartholomew Ave., Hartford, Conn.
Switches; relays; thermostates; electrical and electromechanical devices

Hart Mfg. Co., R. E., 5115 Carpenter Rd., Box 72, Ann Arbor, Mich.
Production counters

Hart Moisture Gauges, see Kaydel Moisture Gauges

Hart Moisture Meters, Raymond S. Hart, Inc., 336 W. Islip Blvd., Babylon, L. I., N. Y.
Moisture testers

Hartford Machine Screw Co., Windsor, Conn.
Screw machine products; precision components and assemblies; stock commercial fastners

Hartford Steel Ball Co., Inc., Hartford 6, Conn.

Harvey-Wells Electronics, Southbridge, Mass.
Aircraft navigational instruments

Harwood Co., Div., Avia Products Co., 7266 Beverly Blvd., Los Angeles, Calif.

Hasco Valve & Machine Co., 1263 N. 70th St., Milwaukee 13, Wis.
Automatic and manual control valves

Hasler-Tel Co., 30 Vesey St., New York 7, N. Y.
Chronometric portable tachometers; portable speed indicators
(See advertisement on page 199)

Hass Instrument Corp., The (formerly Hass Bros. Inst. Co.) 5476 Forestville Road, Washington 28, D. C.
Barometers; altimeters; manometers
(See advertisement on pages 59, 137)

Hassall, Inc., John, P. O. Box 2201, Westbury, L. I., N. Y.

Hastings-Raydist, Inc., P. O. Box 1275, Wythe Branch, Hampton, Va.
Vacuum, pressure, velocity, flow-measuring instruments; electronic surveying, tracking, positioning navigation systems

Hathaway Instrument Co., 5800 E. Tewell St., Denver 22, Colo.
Instruments and apparatus for electrical and mechanical measurements and control

Hausser & Son, C. A., 6040 Belfield Ave., Philadelphia 44, Pa.
Laboratory apparatus; biological instrumentation

Hawk Tool & Engineering Co., Inc., Clarkston, Mich.
Controllers and testing devices

Haydon Co., A. W., 232 N. Elm St., Waterbury 32, Conn.
Relays and timers
(See advertisement on page 47)

Haydon Manufacturing Co., 245 E. Elm St., Torrington, Conn.
A-c, d-c motors; timing devices; clock movements

Haydon Switch Co., 536 So. Leonard St., Waterbury 20, Conn.
Switches

Haydu Electronic Products Inc., 1426 W. Front St., Plainfield, N. J.

Haynes Stellite Div., Union Carbide Corp., 30 E. 42nd St., New York 17, N. Y.
Special metal alloys, bushings, castings, tubing, wire

Hays Corp., Michigan City 39, Ind.
Instrument and control systems for combustion, temperature, pressure, level, flow and gas analysis; data reduction systems

Hays Mfg. Co., Indus. Sales Div., 12th & Liberty Sts., Erie 6, Pa.
Flow Controls

Hayward Scientific Glass Corp., 217 Magnolia St., Whittier, Calif.
Optical glass manufacturing; special heat-treatment; blanks for small and massive optics; leadshielding types; prototype and pyrex glass; index measurement; research
(See advertisement on page 116)

Heat Timer Corp., 657 Broadway, New York 12, N. Y.
Running time recorders

Heil Scientific, Inc., 214 S. 4 St., St. Louis 2, Mo.
Laboratory supplies

Heiland Div., Minneapolis-Honeywell, 5200 E. Evans Ave., Denver 22, Colo.
Recording oscillographs; photographic flash equipment
(See advertisement on pages 38-39)

Heinemann Electric Co., P. O. Box 299, Trenton 2, N. J.

Heinze Electric Co., 685 Lawrence St., Lowell, Mass.

Heise Bourden Tube Co., Brook Rd., Newton, Conn.
Bourdon tube gauges (high precision) for fluid pressures
(See advertisement on page 233)

Heitz, Inc., Karl, 150 W. 54th St., New York 19, N. Y.

Helco Products Corp., 7832 Balboa Blvd., Van Nuys, Calif.
High precision wire-wound potentiometers, round, rectilinear, sector, multi-ganged; electrical read-out; aircraft instrumentation

Heli-Coil Corp., Shelter Rock Lane, Danbury, Conn.
Screw-lock

Helicoid Gage Div., American Chain & Cable Co., 929 Connecticut Ave., Bridgeport, Conn.
Gages for pressure, vacuum or compound service
(See advertisement on page 169)

Helio Instrument Co., Inc., 1 S. Reed St., E. Riverton, N. J.
Laboratory and industrial optical instrumentation and components

Helipot Div., Beckman Insts., Inc., Newport Beach, Calif.
Precision potentiometers; turns-counting dials; breadboard parts; servomotors; resolvers; synchros; delay lines; expanded scale voltmeters; linear scale ammeters; voltage regulators

Heller Co., Gerald K., 1819 Industrial Rd., Las Vegas, Nev.
Electronic motor controllers

Hellige, Inc., 877 Stewart Ave., Garden City, N. Y.
Scientific instruments; laboratory bacteriological supplies

Henderson & Co., H. B., P. O. Box 757, East Liverpool, Ohio
Pyrometric cones

Henry Valve Co., Inc., 3215 North Ave., Melrose Park, Ill.
Control valves

Henschel Corp., 14 Cedar St., Amesbury, Mass.
Marine and industrial interior communication equipment.

Henson Co., Fred C., Box 5265, Pasadena, Calif.
Electroscopes; optical instruments and components; designers and builders of custom instruments

Henszey Co., Watertown, Wis.
Feed water meters; flow indicators; heat exchangers; boiler feed regulators; meters and flow indicators for corrosive chemicals

Herbach & Rademan, Inc., 1204 Arch St., Philadelphia 7, Pa.
Electronic equipment distributors

Hercules Fastner Corp., 2720 Clybourn Ave., Chicago 14, Ill.

Herd, Harold H., 1830 Fletcher St., Pasadena, Cali
Instrument scales and dials; photo-etched reticles

Herman Stone Co., see Mayne Products Co.

Hermaseal Co., Inc., 1101 Lafayette St., Elkhart Ind.
Glass-to-metal seals

Hermetic Seal Corp., 39 S. Sixth St., Newark 7, N. J.

Hermetic Sealing Corp., 99 E. Hawthorne Ave., Valley Stream, L. I., N. Y.
Electrical and electronic test equipment

Herron Optical Co., 9117 S. Main St., Los Angeles 61, Calif.
Precision lenses, prisms and mirrors
(See advertisement on page 149)

Herzog Miniature Lamp Wks., Inc., 50-17 5th St., Long Island City 1, N. Y.

Hetherington & Berner, 701 Kentucky Ave., Indianapolis 7, Ind.
Fluidometers

Hetherington Inc., 1200 Elmwood Ave., Sharon Hill, Pa.
Snap-action switches, push-button, toggle and rotary; indicator lights; relays

Heusser Instrument Mfg. Co., 121 W. Malvern Ave., Salt Lake City 15, Utah
Analytical balances

Hevi-Duty Electric Co., 2040 W. Wisconsin Ave., P. O. Box 563, Milwaukee 1, Wis.
Dry type transformers; saturable reactors; constant-current regulators; laboratory, industrial-heat-treating furnaces; ceramic kilns, gas preparation units

Hewlett-Packard Co., 275 Page Mill Road, Palo Alto, California
Test and measuring instruments: audio oscillators; voltmeters; signal generators; electronic counters, etc

Hewson Co., Inc., 443 Broad St., Newark 2, N. J.
High-voltage test instruments; power supplies; automatic processing control systems; automatic alarm systems

Hexacon Electric Co., 161 W. Clay Ave., Roselle Park, N. J.
Electric soldering irons

Heyman Mfg. Co., 530 Michigan Ave., Kenilworth, N. J.
Inspection instruments

Hickok Electrical Instrument Co., 10519 Dupont Ave., Cleveland 8, Ohio
Electric indicating instruments; electronic test equipment
(See advertisement on page 2)

Hi-G, Inc., Bradley Field, Windsor Locks, Conn.
Sub-miniature, hermetically sealed, a-c & d-c relays

Hi-Grade Alloy Corp., 1236 S. Talman, Chicago 8, Ill.
Printed-circuit solders and fluxes; flux-residue remover; anodes; preforms; fusible alloys

Hi-Q Div., Aerovox Corp., Seneca St., Olean, N. Y.
Capacitors and resistors

Hieatt Engineering Co., P. O. Box 349, Burbank, Calif.
Environmental test chambers

Hiergesell & Sons, Wm., 295 Pearl St., New York 7, N. Y.
Thermometers and hydrometers

High Pressure Equipment Co., 1222 Linden Ave., Erie, Pa.
High-pressure equipment for pressure or temperature applications

High Speed Hammer Co., Inc., 313 Norton St., Rochester 21, N. Y.
Cold riveting machinery

High Vacuum Equipment Corp., 349 Lincoln St., Hingham, Mass.
Vacuum pumps and gates; electrical feed-throughs; vacuum metallizing; impregnating and furnace units

High Voltage Engineering Corp., Burlington, Mass.
Van de Graaff particle and microwave linear accelerators

Hill & Co., E. Vernon, P. O. Box 189, Lake Geneva, Wisc.
Aerological instruments, accessories

Hills-McCanna Co., 3025 N. Western Ave., Chicago 18, Ill.
Diaphragm valves; metering and proportioning pumps

Hillyer Instrument Co., Inc., 331 Centennial Ave., Cranford, N. J.
Computers; automatic machine tool control systems

Hindley Mfg. Co., 51 Charles St., Valley Falls, R. I.

Hirschmann Co., Inc., Carl, 30 Park Ave., Manhasset, N. Y.
High precision machine tools

Hitemp Wires, Inc., 26 Windsor Ave., Mineola, L. I., N. Y.

Hobbs Corp., J. W., 2048 Yale Blvd, Springfield, Ill.
Running time meters; pressure switches

Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.
Computers; wave filters; chemical analyzers; densitometers; concentration recorders

Hoke-Manostat Corp., 148 S. Dean St., Englewood, N. J.
Regulators; flowmeters; valves; stainless steel cylinders

Holtzer-Cabot Electric Div., National Pneumatic Co., Inc. 420 Lexington Ave., New York 17, N. Y.
Fractional-hp motors

Hoover Electronics Co., 3540 Woodland Ave., Baltimore 15, Md.
Specialized instrumentation systems including telemetering, analog to digital converters, wind tunnel instrumentation, and specialized test equipment

Hopkins Engineering Co., 12900 Foothill Blvd., San Fernando, Calif.
Miniature, high temperature capacitors of paper, plastic film, metallized plastic films; custom radio interference filters and supression devices

Hoskins Mfg. Co., Lawton Ave. & Buchanan St., Detroit 8, Mich.
Pyrometers; laboratory furnaces; thermocouples

Houlihan Co., T. J., 2508-18 W. Lawrence Ave., Chicago 25, Ill.

Houston-Fearless Corp., 11801 Olympic Blvd., Los Angeles 64, Calif.
Motion-picture processing equipment

Howard Clock Products, Inc., 256 Charles St., Waltham, Mass.

Howard Industries, Inc., 1760 State St., Racine, Wisc.
Fractional-hp electric motors; generators; fountain mixers

Howe & French Inc., 99 Broad St., Boston 10, Mass.
Laboratory supplies

Howe Scale Co., Inc., Rutland, Vt.

Howell Automatic Mach. Co., 12900 Berea Rd., Cleveland 11, Ohio
Precision screw machine products

Howell Elect. Motors Co., 408 N. Rosevelt Ave., Howell, Mich.

Howell Instrument Co., 3101 Trinity St., Fort Worth, Texas
Slide-wire potentiometers, pyrometer potentiometers, light-beam galvanometers
(See advertisement on pages 111, 161)

Hubbard Scientific Labs., Inc., 1292 E. Third St., Pomona, Calif.

Hubbell Metals, Inc., 2817 Laclede Ave., St. Louis 3, Mo.

Hudson Radio & Television Corp., 37 65th St., New York 23, N. Y.
Electrical and electronic instruments and supplies

Hufco Industries, 2815 W. Olive St., Burbank, Calif.
Relays

Huggins Laboratories, 711 Hamilton Ave., Menlo Park, Calif.

Hughes Aircraft Co., Electron Tube Div., 5330 W. Century Blvd., Los Angeles 45, Calif.

Hughes Aircraft Co., Semi-Conductor Div., 5200 W. 104th St., Los Angeles 45, Calif.
(See advertisement on page 95)

Hughes Co., Kenneth E., 4808 Bergenline Avenue, Union City, N. J.
(See advertisement on page 274)

Hugo Bosca Co., 106 E. Main St., Springfield, Ohio

N.Y.C., N.J. and Eastern Pa.
HEADQUARTERS for
ELECTRONIC EQUIPMENT
and COMPONENTS

Kenneth E. Hughes Company

Representing

Hickok Electrical Instrument Co.
All types, sizes and ranges of panel mounted or portable indicating meters, commercial or ruggedized per MIL specifications. Also logarithmic scaled and 250 degree deflection meters.

Hickok Electrical Instrument Co.
Manufacturers of a complete line of Electronic Test Equipment including tube testers, signal generators, oscilloscopes and volt-ohm-milliammeters.

Acton Laboratories, Inc.
Precision Electronic Instrumentation for industrial or laboratory use. Phase standards and phase meters, eight channel direct wiring oscillograph, V.T.V.M.'s, amplifiers and potentiometer test equipment.

Engineered Electronics Co.
Manufacturers of EECO modular plug-in units for use as building blocks for automation, instrumentation, data handling, computing, timing and other equipment and systems.

Elgin Metalformers Corp.
Manufacturers of the famous EMCOR Modular enclosure system—a new concept that is in effect an engineer's "erector-set" for electronic cabinets.

Peerless Electric Products
Div. of ALTEC Lansing Corp.
Transformers with the reputation of "finest" on the market achieved through advanced engineering and constant quality control.

Specific Products
WWV receivers. Various types from small portable to rack mounted unit with self contained scope, speaker, etc. for accurate frequency comparison.

Brubaker Electronics, Inc.
Quality manufacturers of delay lines, miniature and subminiature relays and pulse transformers—world's largest manufacturer of delay lines.

Foto-Video
Engineering capacity and complete facilities for system or special equipment design, development and production.

McLean Engineering Laboratories
Cooling fans for electronic cabinets—Rack mounted, self contained units and specially designed for standard 19" communication racks. Wide range of air deliveries and standard panel heights.

Ask to see our NEW Mobile Display Room

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634

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• SALES REPRESENTATIVES FOR MANUFACTURERS OF ELECTRONIC EQUIPMENT AND COMPONENTS •
For more information circle **415** on inquiry card.

Hulcher Co., Inc., Charles A., 40 Manteo Ave., Hampton, Va.
High-speed cameras; stroboscopic light sources

Hull Mfg. Co., P. O. Box 246, Warren, Ohio
Compasses

Humboldt Mfg. Co., 2014 N. Whipple St., Chicago 47, Ill.
Laboratory apparatus; testing equipment for asphalt, cement, concrete, petroleum products, soils

Humphrey, Inc., 2805 Canon St., San Diego 6, Calif.
Gyroscopes; potentiometers; accelerometers

Humphrey Products Div. of General Gas Light Co., 202 N. Park St., Kalamazoo, Mich.
High sensitivity valves

Hunt & Son, Inc.; P. O. Box 337, Salem, Ohio
Air and hydraulic control valves; couplings; valve type couplings

Hunter Manufacturing Co., 108 North Linn St., Iowa City, Iowa
Electronic, electromechanical instruments, and controls

Hunter Spring Co., Lansdale, Pa.
Precision springs, wire products, mechanical force gages, constant-force springs and motors

Hupp Electronics Co., Div. of Hupp Corp., P. O. 745 Circle Ave., Forest Park, Ill.
Photocells; remote control and telemetering equipment; quartz crystals

Hupp Instrumation, 2119 Sepulveda Blvd., Los Angeles 25, Calif.
Electronic digital counting instruments for time and frequency measurement or preset control applications

Huppert Co., K. H., 6830-32 S. Cottage Grove Ave., Chicago 37, Ill. Laboratory furnaces

Hy-Pro Tool Co., P. O. Box 945, New Bedford, Mass. Metal cutting tools

Hycon Eastern, Inc., 75 Cambridge Parkway, Dept. DA6, Cambridge 42, Mass.

Hycon Electronics, Inc., 321 S. Arroyo Parkway, Pasadena 1, Calif.
Rack-mounted oscilloscopes, digital voltmeters, color bar dot generator, and color scope.

Hycor Division of International Resistance Co., 12970 Bradley Ave., Sylmar 6, Calif.

Hyde Instrument Corp., 2377 E. Washington St., Pasadena 7, Calif.
Optical gages; surveying instruments

Hydraulic Controls Co., Inc., 87 Terrace St., Roxbury 20, Boston, Mass.
Hydraulic and mechanical servomechanisms; components; solenoid valves

Hydraulic Research & Mfg. Co., 2835 N. Naomi St., Burbank, Calif.
Hydraulic and pneumatic valves; pressure switches; hydraulic servo valves

Hydromatics, Inc., 40 Factory St., Cedar Grove, N. J.
Valves and valve operating devices

Hydroway Scales, Box 531 Oak Ridge Sta., Royal Oak, Mich.
Indicating scales

Hygrotester Inc., P. O. Box 923, Brooklyn 1, N. Y.
Electronic equipment distributor

I

I-L-S Instrument Corp., 4525 W. 160 St. Cleveland 11, Ohio
Electrical and electronic instruments; power supplies; counters; speed indicators

I.T.E. Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
Fixed and variable resistors; manganin resistors; switchgear

Ideal-Aerosmith, Inc., 12909 Cerise Ave., Hawthorne, Calif.
Aircraft instrument test apparatus; sensitive needle valves; Electromechanical and electronic components
(See advertisement on page 59)

Ideal Industries, Inc., 1420 Park Ave., Sycamore, Ill.
Commutator maintenance equipment; electricians tools; wire connectors; machinery products

Illinois Coil Spring Co., 2100 N. Major Ave., Chicago 39, Ill.

Illinois Testing Laboratories, Inc., 420 N. LaSalle St., Chicago 10, Ill.
Temperature, air and dewpoint measuring and controlling instruments
(See advertisement on page 16)

Illinois Tool Works, Licon Switch and Control Div. 2301 N. Keeler Ave., Chicago 39, Ill.
Sensitive and limit precision switches

Imetra Co., Ltd., 136 Liberty St., New York 6, N. Y.
Instrument pivots and bearings

Impact Register Co., P. O. Box 445, Champaign, Ill.
Instruments for determining and recording impacts received by railroad cars and riding qualities of railroad cars, automobiles

Impact-O-Graph Corp., 1900 Euclid Ave., Cleveland 15, Ohio
Impact recorders

Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago 7, Ill.
Fittings, tubing cutters and benders

Imperial Molded Products Corp., 2927 W. Harrison St., Chicago 12, Ill.

Imtra Corp., 58 Charles St., Cambridge 41, Mass.
Stepping and telephone relays; Tension gages

Indiana Gear Works, Inc., 1458 E. 19th St., Indianapolis 7, Ind.
Helicopter transmissions; aircraft actuators; ultra precise gearing

Indiana Steel Products Co., Valparaiso, Ind.
Alnico permanent magnets; cunife, indox ceramic magnets, and miscellaneous
(See advertisement on page 136)

Indicating Calipers Corp., 1359 York Ave., New York 21, N. Y.
Indicating calipers
(See advertisement on page 92)

Indikon Co., 76 Coolidge Hill Rd., Watertown 72, Mass.
Electronic pressure, temperature and vibration monitors; instrument servos; automatic capacitance, resistance limit bridges

Induction Motors Corp., 570 Main St., Westbury, L. I., N. Y.
Dynamotors; synchros; resolvers; solenoids; servo-, gear-, blower-, actuator-motors; synchronous, non-synchronous

Industrial Cold Co., 1000 E. McNichols Rd., Detroit 3, Mich.
Low-temperature and altitude test chambers

Industrial Condenser Corp., 3243-65 N. California Ave., Chicago 13, Ill.
Oil paper and electrolytic capacitors

Industrial Control Co., 805 Albin Ave., Lindenhurst, L. I., N. Y.
Servo amplifiers; magnetic amplifiers; electronic test equipment

Industrial Control Panel Co., 517 W. Monroe St., Chicago 6, Illinois
Automatic control systems and components

Industrial Development Labs., Inc., 17 Pollock Ave., Jersey City 5, N. J.
Mass flowmeters, dual null bridges

Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.
Electrical measuring instruments; neon indicating signals

Industrial Electronic Controls Co., 2271 E. 14th St., Brooklyn 29, N. Y.
Electronic counters, photo-electric controls

Industrial Electronic Engineers 3973 Lankershim Boulevard, North Hollywood, Calif.
Electronic and digital computers; remote control weighing systems; relay switching systems

Industrial Electronics Co., Inc., Hanover, Mass.
Dimensional, smoke-density and liquid-level instruments

Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
Electronic assemblies; automatic electronic gaging machines

Industrial Engineering Corp., 525 E. Woodbine, Louisville 8, Ky.
Designers, engineers, and builders of electronic and electrical functional test equipment; hydraulic component parts
(See advertisement on pages 171, 237)

Industrial Engineering Corp., Rea Bldg., Terre Haute Ind.
Relays

Industrial Gauges Corp., 1500 The Plaza, West Englewood, N. J.
Gaging and inspection devices; remote control equipment

Industrial Hardware Manufacturing Co., Inc., 105 Prince St., New York 12, N. Y.
Printed circuit, laminated, transistor and subminiature sockets; wired assemblies; metal and bakelite stampings

Industrial Instrument Corp., P. O. Drawer 152, Odessa, Texas
Flow meters; orifice plates and unions; thermowells; allied products

Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
Electrolytic-conductivity apparatus; automatic component testers; dielectric strength and insulation resistance testers; Wheatstone bridges; decade boxes
(See advertisements on pages 62, 63, 77, 92, 129, 188)

Industrial Jewel Bearing Co., Stockham Bldg., Morrisville, Pa.

Industrial Nucleonics Corp., 1205 Chesapeake Ave., Columbus 12, Ohio
Process control systems for the rubber, plastics, paper, metals, tobacco and other process industries

Industrial Pyrometer & Supply Co., Alton, Ill.
Thermocouples

Industrial Products Div., General Tire & Rubber Co., Wabash, Indiana

Industrial Rectifier Devices, Inc., 324 Lafayette St., New York 12, N. Y.
Rectifier-type power supplies

Industrial Scientific, Inc., 1014 Taylor St., Fort Worth 2, Texas
Laboratory supplies

Industrial Tectonics, Inc., P.O. Box 606, 3684 Jackson Rd., Ann Arbor, Mich.
Special ball and roller bearings—non-magnetic, corrosion-resistant, heat-resistant, special designs; special material balls; master ball sets

Industrial Test Equipment Co., 55 E. 11th St., New York 3, N. Y.
Phase meters; null detectors; impedance comparators; power oscillators; frequency standards; automatic hi-pot testers
(See advertisement on page 156)

Industrial Timer Corp., 1407 McCarter Highway, Newark 4, N. J.
Synchronous-motor-driven electrical timing devices; punched-card programming equipment

Industro, Inc., 649 Broadway, New York 12, N. Y.
Electron tubes; transistors

Industrol Corp., 494 Westfield Ave., Roselle Park, N. J.
Desiccant-type dryers; prefilters

Industronics, Box 424, Arlington Heights, Ill.
Power supplies; generators; audio oscillators

Inertial Instruments, Inc., 2029 Broadway, Santa Monica, Calif.
Mass flowmeters

Inet-Palmer Div., Leach Corp., 4441 S. Santa Fe Ave., Los Angeles 58, Calif.
Automatic regulators; power supplies; generators; rectifiers

Inferno Co., Box 1138, Shreveport 90, La.
Combustion instruments

Infilco Inc., P. O. Box 5033, Tucson, Arizona

Ingersoll-Rand Company, 11 Broadway, New York 4, N. Y.
Instrument air compressors

Inlaid Optical Corp., 1058 Broad St., Providence 5, R. I.

Insco Co., Div. of Barry Controls, Inc., Hollis St., Groton, Mass.
Recorder accessories and systems; multiple-step speed reducers; vibration test instrumentation

Instant Circuit Div., 32-44 Francis-Lewis Blvd., Flushing 58, N. Y.

Instrof Corp., Collegeville 22, Pa.
Racks; housings; covers

Instron Engineering Corp., 2 Hancock St., Quincy 71, Mass.
Testing machines

Instru-Lec Corp., 520 Homestead Ave., Mt. Vernon, N. Y.
Precision, fine-pitch gears, gear boxes and trains

Instrument Associates, Great Neck Road, Great Neck, N. Y.
Aviation and ground instrumentation

Instrument Cases, Inc., 510 W. Garfield Ave., Glendale 4, Calif.
Standard instrumentation transit cases and combination cases

Instrument Components, Inc., Div. of Belock Inst. Corp., 111th St. & 14th Ave., College Point, N. Y.
Electromechanical components

Instrument Corp. of America, P. O. Box 37, Blacksburg, Va.

Instrument Corp. of Florida, P. O. Box 1226, Melbourne, Fla.
Military electronics equipment

Instrument Development Labs., Inc., 67 Mechanic St., Attleboro, Mass.
High-speed rotary and telemetering switches; analog to digital converters, optical color matchers

Instrument Development & Mfg. Corp., 3018 East Foothill Blvd., Pasadena 8, Calif.
Electronic engineering, development and manufacturing; electro-mechanical, mechanical engineering and manufacturing; bearings: precision, high temperature; of special design

Instrument Electronics Corp., 90 Main St., P. O. Box 830, Port Washington, N. Y.
Electronic voltimeters

Instrument Electronics Corp., 104 W. Jefferson St., Falls Church, Va.
Electronic instruments

Instrument Engineering Service, R. 3, Box 345, Michigan City, Ind.
Gas analysis and combustion instrumentation

Instrument Gear Works, 4624 N. Oketo, Chicago 31, Ill.
Standard and special small gears

Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
Electrical testing sets
(See advertisement on page 72)

Instrument Laboratory, Inc., P. O. Box 4098 Seattle 99, Washington
Millivolt-type indicating pyrometers; salinity equipment for marine application; electromagnet balances for wind tunnel use; panels; graphic and non-graphic

Instrument Motors, 460 North Ave., New Rochelle, N. Y.

Instrument Products, 2927 W. Harrison St., Chicago 12, Ill.

Instrument Resistors Co., 1036 Commerce Ave., Union, N. J.
Resistors; fixed, wire wound, precision type

Instrument Specialties Co., Inc., 231 Bergen Blvd., Little Falls, N. J.
Beryllium-copper coil and flat springs, beryllium-copper screw machine products

Instrument Tool & Engrg. Corp., 2507 W. Harrison St., Chicago 12, Ill.

Instrumentation Associates, 17 W. 60th St., New York 23, N. Y.

Instruments Corp., 4 N. Central Ave., Baltimore 2, Md.
Meteorological, hydrological and photogrammetric instruments

Instruments for Industry, Inc., 150 Glen Cove Rd., Mineola, L. I., N. Y.
IF broad band amplifiers

Instruments Inc., 122 N. Madison, P. O. Box 556, Tulsa, Okla.
Level indicators and controllers—gamma ray, capacitance and pneumatically actuated

Insulated Circuits Inc., P. O. Box 717, Passaic, N. J.

Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
Manufactures and distributors of electrical insulation materials

Insuline Corp. of America, 186 Granite St., Manchester, N. H.
Capacitance meters; electrical and electronic components

Intelex Systems, Inc., 22 Thames St., New York 6, N. Y.
Electronics, telecommunications components, equipments, and systems

Intercontinental Dynamics Corp., 170 Coolidge Ave., Englewood, N. J.
Photoelectronic control systems; statistical electronic generators; test equipment

Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
High fidelity audio equipment; power supplies
(See advertisement on page 229)

International Business Machines Corp., 590 Madison Ave., New York 22, N. Y.
Control systems; program controllers; time recorders; data-processing systems

International Decalcomania Co., 32 Union Square, New York 3, N. Y.
Nameplates; direction labels; quick application water slide materials

International Electronic Research Corp., 4027 W. Burbank Blvd., Burbank, Calif.

International Glass Corp., 5431 Tweedy Blvd., South Gate, Calif.
Glass: raw, optical and molded blanks

International Instrument Co., Canyon, Calif.
Liquid-measuring apparatus; automatic titration equip-

ment: (digital) precision recording titration: pH control instruments

International Instruments Inc., P. O. Box #954, New Haven 15, Conn.
Electrical and electronic instruments

International Microscope & Art Co., 7544 N. Ridge, Chicago 45, Ill.
Microscopes

International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
Nickel alloys

International Optical Co., Inc., 45 Urban Ave., New Cassel, Waterbury, L. I., N. Y.
Lenses for mechanical, electrical and optical instruments, fine reticle engraving on glass; glass, quartz, pyrex, metal lapping; military optics; mirrors
(See advertisement on page 151)

International Powder Metallurgy Co., 439 W. Main St., Ridgeway, Pa.
Powdered metal parts

International Products Corp., 2554 Greenmount Ave., Baltimore 18, Md.

International Radiant Corp., 40 Matinecock Ave., Port Washington, N. Y.
Testing chambers and ovens
(See advertisement on page 98)

International Rectifier Corp., 1521 E. Grand Ave., El Segundo, Calif.
Photoelectric cells and dry disc rectifiers; sun batteries; germanium diodes and rectifiers
(See advertisement on page 181)

International Register Co., 2620 W. Washington Blvd., Chicago 12, Ill.
Timing controls, electrical apparatus

International Research & Development Corp., 797 Thomas Lane, P. O. Box 1707, Columbus 16, Ohio
Vibration analyzers; dynamic balancing machines; spin test units; ultra-speed centrifuges

International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.
Metallized and wirebound fixed and variable resistors including high voltage and high frequency types

International Telemeter Corp., 2000 Stoner Ave., Los Angeles 25, Calif.
Ceramic ferromagnetic cores for switching and storage; cores for magnetic read and record heads; television distribution system equipment

Ircal Industries, 2242 Sepulveda Blvd., Los Angeles 64, Calif.
Resistors

Iron Fireman Mfg. Co., Electronics Div., 2838 S. E. Ninth Ave., Portland 2, Oregon
Relays, vertical gyroscope

Islip Transformer and Metal Co., Inc., Foot of Beech St., Islip, N. Y.
Amplifiers

Isotope Products, Inc., Station B, Box O, Buffalo 7, N. Y.
Process control systems

Ithaca Scientific Instrument Co., Ithaca, N. Y.
Drawing instruments

J

J B L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa.
Rotary transfer switches; stress and strain-gage switches

J-B-T Instruments, Inc., 441 Chapel St., New Haven 8, Conn.
Vibrating reed frequency meters; elapsed time meters; rotary-selector switches; temperature measuring instruments
(See advertisement on page 254)

JFD Manufacturing Co., Inc., 6101 16th Ave., Brooklyn 4, N. Y.
Variable capacitors; quartz; dielectric materials

Jack Scientific Instrument Co., Bill, Solana Beach, Calif.
Cameras and camera control systems; programming and timing devices

Jackes-Evans Mfg. Co., 4427 Geraldine Ave., St. Louis 15, Mo.
Control valves

Jackson Electrical Instrument Co., 18 S. Patterson Blvd., Dayton 2, Ohio
Radio-electronic television instruments; marine equipment

Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda 14, Md.
Electronic digital computers; navigational systems; delay lines; pulse generators; compact electronic counters; weapons and control systems

Jacoby-Tarbox Corp., 808 Nepperhan Ave., Yonkers, N. Y.
Moisture meters; rotameters; sight flow meters

Jadow Inc., B., 860 Broadway at 17th St., New York 3, N. Y.
Dimensional gaging equipment; special lubricants; fractional-hp motors

Jaeger Watch Co., Inc., 304 East 45th St., New York 17, N. Y.
Automobile clocks; timepieces for aviation and marine; chronomatic tachometers and true airspeed indicators

Jaegers Optical Corp., A., 692 Merrick Rd., Lynbrook, N. Y.
Achromatic objectives; prisms; eyepieces; first surface mirrors; etc.
(See advertisement on page 147)

Jaidinger Mfg. Co., 1921 W. Hubbard St., Chicago 22, Ill.
Temperature controllers; relays; switches

James-Pond-Clark, 2181 E. Foothill Blvd., Pasadena 8, Calif.
Check valves; relief valves

James Vibrapowr Company, 4036 N. Rockwell St., Chicago 18, Illinois
Choppers; power supply vibrators

Jamesbury Corp., 45 New St., Worcester 5, Mass.
Hydraulic devices

Jan Hardware Manufacturing Co., Inc., 75 N. 11th St., Brooklyn 11, N. Y.

Jansson Gage Co., 7444 Beaverland, Detroit 39, Mich.
Gage block sets; sine bars; tri squares; accessories

Jarco Services, Inc., 725 S. Erie St., Tulsa, Okla.
Level indicators and controls; analytical instruments; millivolt indicators

Jarrell-Ash Co., 26 Farwell St., Newtonville 60, Mass.
Spectro-chemical analysis and X-ray diffraction instruments for use in metallurgy, research, quality control, trace element determinations, pathological investigations

Jarvis Co., Chas. L., Middletown, Conn.

Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
Aircraft navigational instruments; resistors

Jarvis & Jarvis, Inc., 110 Pleasant St., Palmer, Mass.

Jeffrey Mfg. Co., P. O. Box 1879, Columbus 16, Ohio
Weighing, feeding, batching and proportioning equipment

Jeffries Transformer Co., 1710 E. 57th St., Los Angeles 58, Calif.

Jelliff Manufacturing Corp., C. O., P. O. Box 68, Southport, Conn.
Indicating comparators

Jelrus Co., Inc., 136 W. 52nd St., New York 19, N. Y.
Electric furnaces; temperature control devices

Jem-O-Matic, Inc., 530 Cherry Lane, New Hyde Park, L. I., N. Y.

Jenkins Bros., 100 Park Ave., New York 17, N. Y.
Regulating valves

Jennings Radio Mfg. Corp., 970 McLaughlin Ave., San Jose 8, California
Vacuum capacitors; vacuum switches and relays; vacuum tube kilovolmeters

Jensen Tool Co., Henry C., 16 Mechanic St., Waltham, Mass.
Hairspring testers; toolmakers' test indicators

Jerpbak-Bayless Co., Solon Rd., Solon, Ohio
Indicating comparators

Jerguson Gage & Valve Co., Adams Street, Burlington, Mass.
Precision gages and valves

Jerrold Electronics Corp., 23rd & Chestnut St., Philadelphia 3, Pa.
RF amplifiers; rf meters; sweep frequency generators; communication measuring instruments

Jessop Steel Co., Washington, Pa.

Jessup Eng. & Dev. Co., 3980 Superior St., Cincinnati 36, Ohio
Dimensional equipment; orifice plates; regulators

Jo-Bell Products, Inc., 5456 W. 111th St., Oak Lawn, Ill.
Liquid level alarms; magnetic proximity switches

Jo-Line Tools, Inc., 8442 Otis St., South Gate, Calif.
Torque wrenches

Johanson Mfg. Corp., 10 Rockaway Valley Rd., Boonton, N. J.
Variable and precision capacitors

Johansson Gage Co., See Swedish Gage Co. of America

Johnson Co., E. F., 2712 Second Ave., S. W. Waseca, Minn.
Tube sockets; jacks; plugs; knobs and dials; indicators; capacitors; transmitters, am, fm & ssb

Johnson Corp., 805 Wood St., Three Rivers, Mich.
Rotary pressure joints; steam separators; solenoid-operated valves; liquid level controls; high temperature boiler return systems

Johnson Engrg. Co., Inc., Welton V., 95 Summit Ave., Summit, N. J.
Instrument bearings; shafts; pivots; tubing; special lubricants

Johnson Gage Co., 534 Cottage Grove Rd., Bloomfield, Conn.
Comparators and gages

Johnson Gas Appliance Co., 565 E. Ave., N. W., Cedar Rapids, Iowa
Laboratory furnaces

Johnson Scientific Instrument Co., 2915 Maples Ave., Berwyn, Ill.
Biological instruments, instrument-repair tools

Johnson Service Co., 507 E. Michigan St., Milwaukee 2, Wisc.
Automatic temperature and humidity control for heating, cooling, ventilating, air conditioning and industrial processes
(See advertisement on page 215)

Johnson-Williams, Inc., P. O. Box 307, Sta. A, Palo Alto 17, Calif.
Combustible gas indicators and alarm systems, portable and continuous; including accessories
(See advertisement on page 111)

Johnston & Jennings Company, 877 Addison Rd., Cleveland 14, Ohio
Depth gages, valves

Jones Div., Howard B. Cinch Mfg. Co., 1026 S Homan Ave., Chicago 24, Ill.
Connectors

Jones Electronics Co., M. C., 96 N. Main St., Bristol, Conn.
Standing wave meter

Jones & Lamson Machine Co., 160 Clinton St., Springfield, Vt.
Optical comparators

Jones Motrola Corp., 432 Fairfield Ave., Stamford, Conn.
Tachometers, speed indicators and speedometers

Jones Optical Works, A. D., 2400 Massachusetts Ave., Cambridge, Mass.
Electronic and optical elements; glass, quartz, opaque and transparent
(See advertisement on page 147)

Jordan Co., Inc., 3235 W. Hampton Ave., Milwaukee 9, Wis.

Jordan Electronics, Inc., 3025 W. Mission Rd., Alhambra, Calif.
Nuclear instruments for health monitoring systems, industrial control, and measurement

Jordan Div. of OPW Corp., 6013 Wiehe Rd., Cincinnati 13, Ohio
Specialty valves; fittings, and assemblies

Jorgan Co., 65 Atlantic Ave., Rochester 7, N. Y.

Joy Manufacturing Co., Electrical Connector Div., 1201 Mackland Ave., St. Louis 10, Missouri
Air compressors; electrical connectors; plastic and rubber molds; hard rubber molded parts; vacuum pumps
(See advertisement on page 78)

Joyro Associates, 488 Latham Road, Mineola, Long Island, N. Y.
Special slide rules

Judson Bigelow, Inc., 171 Spring St., New York 12, N. Y.
(See advertisement on page 68)

Julie Research Laboratories, 556 West 168th St., New York, N. Y.
Resistors; high precision resistance, voltage and current instrumentation

K

K-F Development Co., 2606 Spring St., Redwood City, Calif.
Af and rf amplifiers

Kaar Engineering Co., 2995 Middlefield Rd., Palo Alto, Calif.
Radio and navigation instruments

Kahl Scientific Instrument Co., Box 1166, El Cajon, Calif.
Thermometers; hydrometers; psychrometers; hygrometers

Kahle Engineering Co., 1310 Seventh St., North Bergen, N. J.
Transistors; diodes; electron tubes; lamps; mercury switches

Kahn and Co., Inc., 541 Windsor, Hartford 1, Conn.
Custom built hydraulic, pneumatic, and electrical-electronic test equipment

Kaiser Aircraft & Electronics Corp., Toledo Elect. Div., 6255 Renore Rd., Box 437, Toledo 1, Ohio

Missile system testers; electronic test equipment; mobile electronic equipment; specialized test stands

Kansas City Laboratory Supply Co., 307 Westport Road, Kansas City 11, Mo.
Laboratory supplies

Kanthal Corporation, 7 Amelia Place, Stamford, Conn.
Electric resistance alloys for high temperature heating

Karn Chemical Equipment Co., 518 Dickson Ave., Pittsburgh 2, Penna.
Thermowells
(See advertisement on page 224)

Karnish Instrument Sales & Service Inc., 3rd Ave. & Maple St., Lock Haven, Penna.

Kates Co., W. A., 430 Waukegan Rd., Deerfield, Ill.
Automatic self-operated flow controllers
(See advertisement on page 277)

Kato Engrg. Co., 1415 First Ave., Mankato, Minn.
A-c generators; motor-generators; frequency changing motor-generator sets; rotary converters; a-c motors; d-c motors
(See advertisement on page 113)

Kauffman-Lattimer Co., 230 N. Front St., Columbus 16, Ohio
Laboratory supplies

Kay Electric Co., 14 Maple Ave., Pine Brook, N. J.
Electronic Instruments

Kay Lab., Bx. 623, San Diego, Calif.
(See advertisement on page 35)

Kaydel Moisture Gauges, 126 Liberty St., New York 6, N. Y.
Moisture meters

Kaye & MacDonald, Inc., 1115 Central Ave., West Orange, N. J.
Automatic controllers and regulators

Kearfott Company, Inc., 1378 Main Ave., Clifton, N. J.
High-precision servo system components; gyroscopic instruments; navigational systems based on gyros; airborne indicators for specific applications

Keckley Co., O. C., 3400 Cleveland St., Skokie, Illinois
Steam and liquid control equipment including precision pressure regulators, temperature regulators, float valves, strainers, safety valves and solenoid valves

Keim Precision Mirrors, 1346 E. Colorado St., Glendale 5, Calif.
High vacuum evaporated optical coating; filters; one-way mirrors

Keithley Instruments, Inc., 12415 Euclid Ave., Cleveland 6, Ohio
Electronic test instrumentation

Keller, Jr., Hugo P., 50 E. 42nd St., New York 17, N. Y.
Synthetic sapphire products; mercury
(See advertisement on page 122)

Keller Products, Inc., 41 Union St., Manchester, N. H.
Laminated products

Kelley-Koett Mfg. Co., Inc., Covington, Ky.
X-ray apparatus

Kellogg Switchboard & Supply Co., 79 West Monroe St., Chicago 3, Ill.
Relays; keyswitches; ac generators

Kelnor Mfg. Co., 222 Kearney St., San Francisco 2, Calif.

Kelvin Electric Co., 5907 Noble Ave., Van Nuys, Calif.
Precision resistors

Kemlite Laboratories, 1819 W. Grand Ave., Chicago 22, Ill.
Condenser discharge flashtubes

Kemp Mfg. Co., C. M., 405 E. Oliver St., Baltimore 2, Md.
Air and gas dehydrators; inert gas generators; flame arrestors and fire checks

Kemtron Electron Products, Inc., 14 Prime Place, Newburyport, Mass.
Silicon and germanium diodes

Kendall Controls Corp., 144 Moody St., Waltham, Mass.
Valve-operating devices; control valves; automatic controllers

Kendrick & Davis Co., Lebanon, N. H.
Instrument tools; countersinks and counter bores; fractional-hp motors

Kennedy & Co., P. S., Cohasset, Mass.

Ken-Rad Tube Lamp Co., Owensboro, Ky.

Kent Cliffs Laboratories, Div. Torsion Balance Co., Monhegan Ave., Clifton, N. J.
Hardness testers; laboratory, analytical, precision, and pharmaceutical balances and weights

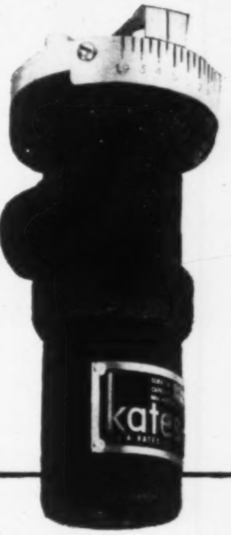
Kenyon Transformer Co., Inc., 840 Barry St., New York 59, N. Y.
Instrument and power transformers; filters; chokes

How much hardware did your last flow control system require? How much engineering?

DON'T Build a System

Install a

Kates*

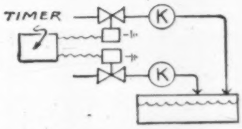


*KATES direct-acting flow rate regulators do the job alone. Merely pipe the liquid into and out of the single unit, set the dial, and you get the exact required flow rate even if inlet-to-outlet pressure jumps or drops as much as 125 psi. Use for clear liquids, light slurries, many suspensions.

Standard units are rated from 0.02-0.20 up to 100-550 GPM. Also available with remotely-operated electrical or pneumatic positioners for remote or automatic adjustment. If required, special units can be supplied for unique applications. Kates regulators eliminate hunting, lagging, and wire-drawing, save space, and simplify installation and maintenance.

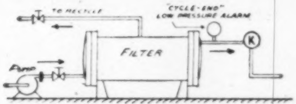
TYPICAL APPLICATIONS

BATCH PROCESS MEASUREMENT



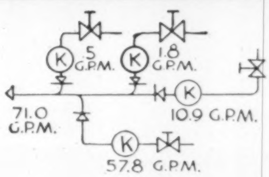
Automatic batch processes are easy when liquid ingredients are fed through Kates regulators and timer-operated solenoid valves. One timer can control all additives since individual flow *rates* can be set at each regulator. And it is easy to change proportions; just change the regulator settings.

PRESSURE FILTRATION CONTROL



As filter cake builds up, a constant valve-jockeying is needed to smooth out flow. A Kates control in the effluent compensates for rising pressure drop, keeps filter at best rating.

PROPORTIONATE BLENDING CONTROL



Where many ingredients go into one blend, and must be in exact proportion, a control *system* for each ingredient would cost plenty. But a Kates control on each feed does the job inexpensively, and each unit can be reset for a blend change.

Write for Technical Bulletins No. 561 and 562 — TODAY

Kates

W. A. KATES COMPANY
Department E
430 Waukegan Rd.
Deerfield, Illinois

For more information circle **416** on inquiry card.

Kepco Laboratories, 131-38 Stanford Ave., Flushing 55, L. I., N. Y.
Power supplies, ac and dc; electronic equipment

Kessler Co., Frank 41-45 Forty-seventh St., Long Island City 4, N. Y.
(See advertisement on page 230)

Kessler Co., Walter H., 180 Lafayette St., New York, N. Y.
Thermometers and hydrometers

Kester Solder Co., 4201 Wrightwood Ave., Chicago 39, Ill.
Cored solders; solder preforms

Keuffel & Esser Co., Adams & Third Sts., Hoboken, N. J.
Surveying instruments

Kewaunee Mfg. Co., End So. Center St., Adrian, Mich.
Laboratory furniture

Key Electric Corp., 46 S. Bayles Ave., Port Washington, N. Y.
Digital magnetic tape recorders

Keystone Carbon Co., Inc., Saint Marys, Pa.
Self lubricating bearings and bushings; resistors; metal, graphite brushes

Keystone Products Co., 904-6 Twenty Third St., Union City, N. J.
Power supplies; transformers; magnetic amplifiers; components

Kieley & Mueller Inc., 64 Genung St., Middletown, N. Y.
Automatic diaphragm control valves; pressure regulators; float valves; liquid level displacement controllers

Kimberly Clark Corp., Neenah, Wis.

Kimble Glass Co., Owens-Illinois Bldg., Toledo 4, Ohio
Glass apparatus; glass tubing; thermometers; hydrometers

Kin Tel, Cohu Electronics, 5725 Kearney Villa Rd., San Diego 11, Calif.
D-c amplifiers; d-c power supplies; meter calibrators; galvanometers; microvolt ammeters; industrial and broadcast television equipment
(See advertisement on page 35)

Kinetic Engineering Co., M-217, Delaware Trush Bldg., Wilmington 1, Del.
Flow-rate and proportioning measurement and control equipment.

Kinetic Instrument Co., 1418 Arbor Ave., Highland Park, Ill.
Laboratory apparatus; electrical and electronic instruments; relays

Kinetix Inst. Div., Ketay Instrument Corp., Commack, L. I., N. Y.
Servomotors; resolvers; synchros

Kinevox Div. of Electromation Co., 116 S. Hollywood Way, Burbank, Calif.
Synchronous magnetic film recorders; reproducers; bulk sound erasers; associated magnetic recording equipment

King Engineering Corporation, 3201 S. State St., Box 625 Ann Arbor, Mich.
Manometers; pressure instruments
(See advertisement on page 137)

King Gem Co., Gellatin Gabway, Mont.

King Tester Corp., 440-44 N. 13th St., Philadelphia 23, Pa.

Kings Electronics, Inc., 40 Marbledale Rd., Tuckahoe, N. Y.

Kinney Manufacturing Div., New York Air Brake Co., 3529 Washington St., Boston 30, Mass.
Vacuum pumps and valves

Kirk & Blum Manufacturing Co., 3120 Forrer St., Cincinnati 9, Ohio
Instrument panels and sheet metal assemblies; air supply, fume exhaust, dust control, dust collection systems; laboratory and production industrial ovens
(See advertisement on page 64)

Kirkland Co., H. R., 10 King St., Morristown, N. J.
Bulls eye lenses; indicating lamps; pilot lights; push button switches; annunciators

Kistler Instrument Corp., 15 Webster St., N. Tonawanda, N. Y.
Precision transducers for measurement of pressure, forces, vibration and acceleration
(See advertisement on page 174)

Kleinschmidt, Inc., County Line Rd., Deerfield, Ill.
Printed telecommunications equipment; air-borne teletypewriters; special components for automatic teletypewriter switching systems

Klett Mfg. Co., 179 E. 87th St., New York 28, N. Y.
Colorimeters

Klipfel Valves, Inc., Div. of Hamilton-Thomas Corp., 1075 Lincoln Ave., Hamilton, Ohio
Automatic regulating valves

Knights Company, James, Sandwich, Ill.
Crystals; crystal package oscillators; ovens; precision frequency standards

Knopp Inc., 4224 Holden St., Oakland 8, Calif.
High-precision electrical laboratory apparatus and testing devices

Koch & Co., F. A., 72 Spring St., New York 12, N. Y.
Laboratory supplies

Koch & Sons, H., Corte Madera, Calif.
Fiberglas products

Kocour Co., 4800 S. St. Louis, Chicago 32, Ill.
Electroplating solution tester; plating thickness gage; pH meter

Koehler Instrument Co., Inc., 168-56 Douglas Ave., Jamaica 33, N. Y.
Petroleum and paint testing equipment; polariscope tubes and accessories
(See advertisement on page 57)

Kohler Co., P. O. Box A, Kohler, Wisconsin
Plumbing fixtures; all-brass fittings; electric plants; air-cooled engines; heating equipment; precision controls

Koiled Kords, Inc., Box K, Hamden, Conn.
Retractile cords

Kollmorgen Optical Corp., 347 King St., Northampton, Mass.
Submarine and Industrial periscopes; borescopes; projection lenses; fire control devices for armed forces, viewing scopes; rifle scopes
(See advertisement on page 150)

Kollsman Instrument Corp., 80-08 45th Ave., Elmhurst 73, Long Island, N. Y.
Precision instruments for aircraft

Kontes Glass Co., Spruce St., Vineland, N. J.
Glass apparatus, instruments and parts

Kopp Scientific Inc., 15 Park St., Springfield, Mass.
Microchemical and micromechanical apparatus; bloodtest apparatus; automatic time switches

Krembs & Co., 669 W. Ohio St., Chicago 10, Ill.
Fluxes for soldering, brazing and welding, coated welding electrodes.

Krohn-Hite Corp., 580 Massachusetts Ave., Cambridge 39, Mass.
Oscillators; square wave generator; variable electronic filters; ultralow distortion power amplifiers; regulated power supplies

Krouse Testing Machine Inc., 573 E. 11th Ave., Columbus 3, Ohio
Fatigue testing machines

Kruger Instruments, Harold, P. O. Box 164, San Gabriel, Calif.
Mercury vapor detectors; ultraviolet photometers; gas-analyzers; spectrophotometers

Kulka Electric Mfg. Co., 633 So. Fulton Ave., Mt. Vernon, N. .Y.
(See advertisement on page 205

Kurman Electric Co., Inc., 191 Newel St., Brooklyn, N. Y.
Relays; vibrators; electronic control devices

Kurz-Kasch, Inc., 1421 So. Broadway, Dayton 1, Ohio
Custom molders of thermosetting and fluorocarbon plastics

Kushner Laboratories, Joseph B., 115 Broad St., Stroudsburg, Pa.
Surface tension measuring instruments

Kwikheat Manufacturing Co., 3732 San Fernando Rd., Glendale 4, Calif.
Soldering irons

Kybernetes Corp., 9 E. 40th St., New York 16, N. Y.
Scanning systems; annunciators; process measurement and control equipment and components

L

L. A. B. Corp., P. O. Box 278, Skaneateles, N. Y.
Vibration Test equipment; torque measuring dynamometers

L and L Manufacturing Co., 804 Mulberry St., Upland, Chester, Pa.
Electric furnaces and ovens

L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.

L & R Manufacturing Co., 577 Elm St., Arlington, N. J.
Precision instrument cleaning machines; cleaning and rinsing compounds; fractional-hp motors

Labline, Inc., 3070 W. Grand Ave., Chicago 22, Ill.
Laboratory apparatus; testing equipment; components

Laboratory Construction Co., 1113-15 Holmes St., Kansas City 6, Mo.
Laboratory furniture and apparatus

Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
Oscilloscopes; digital voltmeters and frequency meters; microwave oscillators; portable GCA radar equipment

Laboratory Equipment Corp., Box 151, St. Joseph, Mich.
Carbon and sulphur determinators

Laboratory Furniture Co., Inc., Old Country Road, Mineola, L. I., N. Y.
Laboratory furniture

Laboratory Materials Co., 1330 E. Hyde Park Blvd., Chicago 15, Ill.
Laboratory supplies

Laboratory of Electronic Engineering, Inc., 413 L. St., N. W., Washington 1, D. C.
Regulated power supplies

Laboratory Optical Co., U. S. Highway 22, Plainfield, N. J.
Optical inspection instruments; components; cameras

Lab-Tronics, Inc., 3656 N. Lincoln Ave., Chicago 13, Ill.
Laboratory apparatus; electrical and electronic instruments; components

Lafayette Instrument Co., N., 26 St., Layfayette, Ind.
Electrical and electronic instruments; motors; optical projectors; lie detectors; special timepieces

Lake Erie Electric Mfg., Inc., 2952 W. 22nd St., Erie, Pa.
Relay control equipment; electric switch boards and panel boards

LaMarche Mfg. Co., 9216 W. Grand Ave., Franklin Park, Ill.
Constant voltage regulators, rectifiers

Lamb Electric Co., Lake St., Kent, Ohio
Fractional-hp motors

Lambda Electronics Corp., 11-11 131st St., College Point 56, New York
Power supplies

Laminations Co., 300 Main St., Stamford, Conn.
Pre-tooled laminations for electric motors, generators.

Lammert & Mann Co., 260 N. Woods St., Chicago 12, Ill.
Vacuum pumps; air compressors

La Motte Chemical Products Co., Chestertown, Md.
pH control equipment; chemical controls; special reagents for research and analylsis; soil testing equipment

Lampkin Laboratories, Inc., Bradenton, Fla.
Radio-frequency meters; modulation meters

Lancaster Glass Corp., Lancaster, Ohio
Electronic and industrial glassware; lenses; reflectors; glass and plastic parts

Lance Products, P. O. Box 251, Forest Hills 75, N. Y.
Adjustable frequency vibration tables; portable vibration amplitude meter

Land-Air, Inc., 744 Wilson Ave., Chicago 6, Ill.
Electronic and electromechanical equipment for missiles and avionics

Landis & Gyr, Inc., 45 West 45th St., New York 36, N. Y.
Electric integrating meters; indicating and graphic demand meters for KW, KVA, reactive; prepayment meters; totalizing and remote; time switches; motor wound escapement or synchronous motor types with astronomic dials; miniature ball bearings

Landis Machine Co., 5th & Church Sts., Waynesboro, Penna.
Die heads; taps

Landsverk Electrometer Co., 550 W. Garfield Ave., Glendale 4, Calif.
Instruments and special components for X-ray and radioactivity measurements, including neutron dosimeters, standard roentgen meters
(See advertisement on page 178)

Langevin Mfg. Corp., 47-37 Austell Pl., Long Island City, L. I., N. Y.
Amplifiers; transformers; power supplies; filters; oscillators

Lansdale Tube Co., Div. of Philco Corp., Lansdale, Pa.
Surface barrier transistors; junction transistors; VHF tuner diodes; X-band mixer diodes; subminiature tubes; receiving tubes; cathode-ray tubes

LaPine & Co., Arthur S., 6001 S. Knox Ave., Chicago 29, Ill.
Laboratory supplies

Lapp Insulator Co., Inc., Process Equipment Division, 39 Gilbert St., Le Roy, N. Y.
Corrosion-proof chemical porcelain ware; controlled volume pumps; piston-diaphragm pumps

Larrimore Sales Co., P.O. Box 1234, St. Louis 1, Mo.
Magnifiers

Larson Instrument Co., 24 Orchard St., Tarrytown, N. Y.
Plug-in contact meter indicating controls; inkless 30 channel recorders

LaValee & Ide, Inc., Grape St., Chicopee, Mass.

Lavoie Laboratories, Matawan Freehold Rd., Morganville, N. J.
Ultra high frequency; precision frequency meters

Lawrence & Hill, Inc., 142 Main Ave., Watertown, N. Y.
Gages and gaging fixtures

Lawter Chemicals, Inc., 3563 Touhy Ave., Chicago 45, Ill.
Luminous and fluorescent chemicals and coatings

Leach Relay Div., Leach Corp., 5915 Avalon Blvd., Los Angeles 3, Calif.

Lear, Inc., 12272 Sky Lane, Los Angeles 49, Calif.
Electronic and mechanical aircraft accessories; aircraft radio equipment; radio compasses, etc.

Lectrohm, Inc., 5560 Northwest Highway, Chicago 30, Ill.
Wire wound resistors

Lectronic Research Labs., 715 Arch St., Philadelphia 6, Pa.
Electrical and electronic components; motors; cathode-ray tubes

Ledeen Mfg. Co., 3350 North Gilman Rd., El Monte, Calif.
Air & hydraulic cylinders and valves; valve actuators; air/hydraulic pumps

Lee Spring Co., Inc., 30 Main St., Brooklyn 1, N. Y.
Solenoids

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
Electrical laboratory instruments for research, teaching and testing; equipment for plant measurments and control; heat treating furnaces

Leetronics, Inc., Div., Lee Spring Co., Inc., 30 Main St., Brooklyn 1, N. Y.
Rotary solenoids; stepping switches

Lehigh Chemical Co., Chestertown, Maryland
Lubricants
(See advertisement on page 128)

Leighton Labs., H. W., Sunset Lane & York Rd., Hatboro, Pa.
Geiger-Mueller tubes; health-monitoring chambers

Leiman Bros., Inc., 191 Christie St., Newark 5, N. J.
High-vacuum pumps

Leitch Engineering Corp., 326 Lincoln St., Manchester, N. H.
Test instruments; mobile antennas; aircraft locator beacons

Leitz Inc., E., 468 Fourth Ave., New York, N. Y.
Optical instruments

LEL, Inc., 380 Oak St., Copiague, N. Y.
RF and IF amplifiers for radar and missile use

Leland Inc., G. H., 123 Webster St., Dayton 2, Ohio
Circuit selector switches, stepping relays, rotary solenoids

Leland Electric Div., A.M.F., 1501 Webster St., Dayton, Ohio
Motors and generators, standard or special

Lemert Engineering Co., Inc., 201 E. Jefferson St., Plymouth, Ind.
Riveters; custom and special fastening machines

Lenkurt Electric Co., 1105 Country Road, San Carlos, Calif.
Ultrasonic-frequency transformers, metallic dust cored; inductors; electric wave filters

Lennard & Co., Inc., P. M., P. O. Box 56, Village Station, New York, N. Y.
Dust and humidity control hoods

Lenox Instrument Co., 2010 Chancellor St., Philadelphia 3, Pa.
Optical and technical instruments

Lenz Electric and Manufacturing Co., 1751 N. Western Ave., Chicago 47, Ill.
Wire; cable; cable harness assemblies, etc.

Leonard Inc., Wallace O., 373 S. Fair Oaks Ave., Pasadena, Calif.

Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
Laboratory furnaces; high-frequency apparatus

Lerco Electronics, Inc., 501 S. Varney St., Burbank, Calif.
Terminals, turret and insulated; terminal board assemblies

Leroy M. E. Clausing Co., 8038 Monticello Ave., Skokie, Ill.
Coatings by high vacuum process — Beral, aluminum, copper, gold, platinum, transparent mirrors; precision optical components — Schmidt systems, paraboloidal, spheroidal, hyperboloidal; optical flats

LeRoy Maugans Leather Co., 1403 Lincoln St., Anderson, Ind.

Leslie Co., Grant Ave., and Val Brook Ave., Lyndhurst, N. J.
Pressure reducing valves; pump governors; temperature regulators; pressure controllers

Lessells & Associates, Inc., 916 Commonwealth Ave., Boston 15, Mass.
Special testing machines; electrical and mechanical control systems; strain gage instrumentation

Leupold & Stevens Instruments, Inc., 4445 N.E. Glisan St., P. O. Box 5082, Portland 13, Ore.
Recorders and indicators, for irrigation, power, waterworks, sewerage; equipment for hydraulic laboratories; snow-rain recorders; hydrographic accessories; transits; levels

Levin & Son., Inc., Louis, 3610 South Broadway, Los Angeles 7, Calif.
Instrument lathes; micro-drill presses; micro-drills

Levinthal Electronic Products, Inc., Stanford Industrial Park, Palo Alto, Calif.
Radio and high-voltage power supplies; modulators; microwave transmitter systems; scintillation crystals; medical electronic instrumentation

Levy & Co., Max, Wayne Ave. & Berkley St., Philadelphia 44, Pa.
Precision rulings on glass; scales; grids; reticles; graticles
(See advertisement on page 191)

Lewis & Co., J. B., 3324 Main St., Hartford 5, Conn.
Motor controls; adjustable speed-electronic exciters

Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
Aircraft temperature instruments; selector switches; connector blocks; thermocouples; resistance bulbs; portable pyrometer and test potentiometers; thermocouple wire; special cables and wire
(See advertisement on page 45)

Lewis Spring and Mfg. Co., 2648 W. North Ave., Chicago 47, Ill.
Light, precision compression, extension and torsion springs; wire forms and light stampings
(See advertisement on page 4)

Lewis & Kaufman, Ltd., P. O. Box 337, Los Gatos, Calif.
Power transmitting, rectifiers, electron tubes

Librascope, Inc., 808 Western Ave., Glendale 1, Calif.
Navigation, gun fire, bombing and fire control systems; computers; data handling systems
(See advertisement on page 1)

Librascope, Inc., Burbank Div., 133 E. Santa Anita, Burbank, Calif.
Magnetic digital computing components

Liebel-Flarsheim Co., 111 East Amity Rd., Cincinnati 15, Ohio
Diathermy equipment; electrosurgical apparatus; metabolism test devices; x-ray accessories and timers

Lindberg Engineering Co., 2321 W. Hubbard St., Chicago 12, Ill.

Lindberg Products Co., P. O. Box 908-C, Lakeport, Calif.
Sandblast guns for laboratory or shop
(See advertisement on page 50)

Linde Co., Division of Union Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Gas gages; gas flowmeters; oxygen regulators

Lindly & Co., 248 Herricks Rd., Mineola, L. I., N. Y.
Optical components; illuminators

Lindsay Products, Inc., 10639 Youngworth, Culver City, Calif.
Small and miniature, permanent magnet and other electrical dc motors

Line Electric Co., 271 S. 6th St., Newark 3, N. J.

Ling Electronics, Inc., 5120 W. Jefferson Blvd., Los Angeles 16, Calif.
Electronically-driven vibration testing systems and components; cycling oscillators; high power audio systems
(See advertisement on page 242)

Link Aviation Inc., Binghamton, N. Y.
Aircraft navigational instruments

Linear, Inc., State Rd. & Lerick St., Philadelphia 35, Pa.
Molded seals and gaskets

Link Engineering Co., 13845 Elmira St., Detroit 27, Mich.
Spring testers

PRECISION ENGINEERED

instrument fuses designed for high-speed action . . .

. . . for the protection of delicate electrical equipment.

LITTELFUSE Inc. *Des Plaines, Illinois*

For more information circle **417** on inquiry card.

Liquidometer Corp., 36-16 Skillman Ave., Long Island City 1, N. Y.
Liquid level gages

Liquid Scale Gauge Co., 100 N. First St., Minneapolis 1, Minn.
Liquid level indicating gages

Liquidvision Gauge & Control Corp., P. O. Box 51, Oceanside, L. I., N. Y.
Aircraft fuel quantity indicating systems; position indicating systems; liquid quantity gages

Littlefuse Inc., 1865 Miner St., Des Plaines, Ill.
Glass enclosed cartridge fuses; fuse holders; circuit breakers
(See advertisement on page 279)

Little, Inc., Arthur D., Memorial Drive, Cambridge 42, Mass.
Chemical feeds and special equipment

Little Falls Alloys Co., Inc., 181 Caldwell Ave., Paterson, N. J.
Special, non-ferrous, spring, and electric and electronic wire

Littleford Bros., 453 E. Pearl St., Cincinnati 2, Ohio
Control boards and housings

Litton Industries, 336 N. Foothill Rd., Beverly Hills, Calif. Components Div., 5873 Rodeo Rd., Los Angeles 16, Calif., Electronic Equipment Div., 336 N Foothill Rd., Beverly Hills, Calif.

Litton Industries of Maryland, Inc., 4910 Calvert Rd., College Park, Md.

Livermont, Inc. Myrtle and Maple Aves. Monrovia, Calif.
Positive torque control clutches for power screwdrivers and measuring instruments

Logan Engineering Co., Aridifier Div., 4901 W. Lawrence Ave., Chicago 30, Ill.
Compressed air and gas separators

Logansport Machine, Inc., 40 Payson Rd., Logansport, Ind.

Logeman Co., C. W., 633 Bergen St., Brooklyn 38, N. Y.
Metering and proportioning pumps; homogenizers

Lonergan Co., J. E., 205 Race St., Philadelphia 6, Pa.
Pressure gages

Loral Electronics Corp., 825 Bronx River Ave., New York 72, N. Y.
Remote and machine control equipment; digital computers

Lord Mfg. Co., 1635 W. 12th St., Erie 6, Pa.
Vibration and shock control mountings

Los Angeles Scientific Instr. Co., 2451 Riverside Dr., Los Angeles 39, Calif.
Planimeters; integrators; collimators; pantographs; optical testing instruments
(See advertisement on page 159)

Loudon Instr. Div., See Land-Air, Inc.

Lucian Laboratories, 202 Darby Rd., Llanerch, Havertown, Penna.
Smoke and dust detection measurement and recording; optical follower for curve following, recording and reproducing

Lucifer Furnaces, Inc., Neshaminy, Pa.
Furnaces and ovens

Ludwig Inc., F. G., Coulter Rd., Old Saybrook, Conn.
Photocopying machines

Lufkin Rule Co., 1730 Hess Ave., Saginaw, Mich.
Precision tools and measuring tapes

Lumenite Electronic Co., 407 S. Dearborn St., Chicago 5, Ill.
Photoelectric controls

Luther Manufacturing Co., 7312 Varna Ave., N. Hollywood, Calif.
Electronic and instrument components; motors; syncros; relays; electric and electronic windings

Luxo Lamp Corp., 102 Columbus Ave., Tuckahoe, N. Y.
Worklamps

Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
Radio test instruments

Lynn, Robert M., P. O. Box 745 Arcadia, California
Optical parts; optical tools; toolmakers microscopes; interference filters; iris diaphragms
(See advertisement on page 227)

M

MB Mfg. Co., A division of Textron American, Inc., 1060 State St., New Haven 11, Conn.
Electrical instruments

Macalaster Bicknell Co., 243 Broadway, Cambridge 39, Mass.
Laboratory glass apparatus

Macallen Co., Macallen St., Boston, Mass.

Macarr, Inc., 2543 Boston Rd., Bronx, N. Y.
Power supplies; components

Macbeth Corp., Little Britain Rd., Newburgh, N. Y.
Hydrogen ion meters

Macbeth Daylighting Corp., 227 West 17 St., New York 11, N. Y.
Daylight lamps for titration and color matching

Machine Specialties, 4027-33 N. Kedzie Ave., Chicago 18, Ill.
Machinery Electrification, Northboro, Mass.
Remote and machine tool control systems; graphic panels

Machlett & Son, E., 220 East 23rd St., New York 10, N. Y.
Laboratory apparatus and supplies

Mack Electric Devices, Inc., 38 Glenside Ave., Wyncote, Pa.
Mercury plunge type relays; package temperature alarm systems

MacKenzie Walton Co., 478 Pawtucket Ave., Pawtucket, R. I.
Seamless, precision tubing

MacLeod & Hanopol, 10 Roland St., Charlestown 29, Mass.
Test equipment

Magnaflux Corp., 7300 W. Lawrence Ave., Chicago 31, Ill.
Nondestructive testing equipment and materials: magnetic particle, fluorescent magnetic particle, fluorescent penetrant, dye penetrant, ultrasonic, electronic and eddy current methods
(See advertisement on page 20)

Magnatran Incorporated, 248 Schuyler Ave., Kearny, N. J.
Transformers; magnetic components

Magnatrol Valve Corp., 67 Fifth Ave., Hawthorne, N. J.
Valves, solenoid; sizes from ¼" to 3", packless construction, normally closed or normally open type; pressures to 300 psig

Magnavox Co., Inc., 2131 Bueter Rd., Fort Wayne 4, Indiana
Radio; television; high-fidelity phonographs; electronic, electromechanical, electrochemical, test and electronic component equipments

Magnecord Div. of Midwestern Instruments, 1101 S. Kilbourn Ave., Chicago 24, Ill.
Magnetic tape recorders

Magnecraft Electric Co., 3352 W. Grand Ave., Chicago 51, Ill.
Relays

Magnet Wire Division, Essex Wire Corp., Ft. Wayne, Ind.
Magnet wire; bare copper and aluminum wire

Magnetic Amplifiers Inc., 632 Tinton Ave., New York 55, N. Y. West Coast Div., 3160 W. El Segundo Blvd., Hawthorne, Calif.
Magnetic amplifiers; servo systems; saturable transformers; saturable reactors; regulated power supplies; transistor curve tracers; variable speed drives phase analyzers

Magnetic Analysis Corp., 12-44 12th St., Long Island City 1, N. Y.
Magnetic inspectors for steel bars and tubing, (including stainless steel); comparators for ferrous and non-ferrous materials; demagnetizers

Magnetic Controls Co., 6325 Cambridge St., Minneapolis 16, Minn.
Magnetic amplifiers.

Magnetic Industries, Inc., 2640 Huldy St., Houston, Texas
Magnetic amplifiers; servomechanisms

Magnetic Instrument Co., 82 Main Street, West Orange, N. J.
Electrical measurement and control equipment; components

Magnetic Powders, Inc., Johnsonburg, Penna.
Iron powders for electronic components and sintered pressed parts

Magnetic Research Corp., 3160 W. El Segundo Bvld., Hawthorne, Calif.
D-c power supplies; amplifiers; converters; magnetic regulators; pulse generators; servo amplifiers, servo systems
(See advertisement on pages 134-135)

Magnetic Specialties Co., 18 Scudder Ave., Northport, L. I., N. Y.
Amplifiers; transformers; filters

Magnetics, Inc., P. O. Box 391, Butler, Pa.
Computer memory cores; magnetic shields and laminations

Magnetics Research Co., 255 Grove St., White Plains, N. Y.

Magnetrol, Inc., 2110 S. Marshall Blvd., Chicago 23, Ill.
Liquid level and flow controls,—pneumatic or electric
(See advertisement on page 124)

Maguire Industries, See Thordarson-Meissner

Mahady Co., E. F., 857 Boylston St., Boston 16, Mass.
Laboratory supply house

Maida Develp., Washington & Academy, Hampton, Va.

Malco Tool & Mfg. Co., 4025 West Lake Street, Chicago 24, Ill.
Instrument and electronic hardware

Mallory & Co., Inc., P. R. 36 S. Gray St. Indianapolis 6, Ind.
Dry batteries; electrolytic capacitors; electrical contacts; special metals; power supplies

Mallory & Co., Inc., P. R., Battery Div., N. Tarrytown, N. Y.
Mercury batteries

Manning, Maxwell & Moore, Inc., 250 E. Main St., Stratford, Conn.
Gages; valves; industrial instruments; electronic instruments for measurement, transmission and control; aircraft products; hoists, cranes and other materials handling products
(See advertisement on pages 28-29)

Manostat Corporation (see Hoke-Manostat)

Manross & Sons, F. N., Div., Associated Spring Corp., George St., Bristol, Conn.

Mansfield & Green, Inc., 1051 Power Ave., Cleveland 14, Ohio
Pressure testing instruments
(See advertisement on pages 170, 173)

Manson Laboratories, Inc., 207 Greenwich Ave., Stamford, Conn.
Pulse modulators; power supplies; tube testing equipment; crystal frequency synthesizers; wire cable tester; pulse generators

Mantec, Inc., 126 Maryland St., El Segundo, Calif.
Environmetal test equipment; temperature test chambers, humidity chambers

Manufacturers Engrg. & Equipment Corp., York Road & Sunset Lane, Hatboro, Penna.
Gas and optical densitometers

Marac Machinery Corp., 1819 Broadway, New York 23, N. Y.

Marathon Battery Co., Wausau, Wis.
Dry-cells and dry cell batteries

Marble-Card Electric Co., Gladstone, Mich.
Fractional-hp motors

Marchant Calculators, Inc., 1475 Powell St., Oakland 8, Calif.
Fully and semi-automatic all-electric desk calculators; electronic computers and data processing systems

Marchant Research Inc., 1475 Powell St., Emeryville, Calif.
Digital computers

Marco Industries Co., P. O. Box 110, Anaheim, Calif.
Subminiature neon indicator lamps

Marco Industries Inc., Depew, N. Y.
Instrument and servomechanism motors

Marconi Instrumens Ltd., 44 New St., New York, N. Y.
Electrical and electronic instruments; frequency standards; amplifiers

Marine Compass Co., Pembroke, Mass.
Marine navigational instruments

Marine and Industrial Products Co., 3731-35 Filbert St., Philadelphia 4, Pa.
Relief and pop safety valves

Marion Electrical Instrument Co., Stark St. Gate, Grenier Fld., Manchester, N. H.
Electrical indicating instruments; relays

Maris Co., John M., 2100 Arch St., Philadelphia 2, Pa.
Laboratory apparatus

Mark-Tex Corp., 453 W. 17th St., New York, N. Y.

Marks Polarized Corp., 153-16 10th Ave., Whitestone, L. I., N. Y.
Optical components and materials

Marline-Rockwell Corp., 401 Chandler, Jamestown, N. Y.
Ball and roller bearings

Marsco Manufacturing Co., 2909 S. Halsted St., Chicago 8, Ill.
Glass fabrication to close tolerances; tempering of glass for increased resistance to physical, thermal shock; custom drilling, ceramic decoration, shaping

Marsh Corp., Jas P., (Marsh Instr. Co., Sales Affiliate), 3501 Howard St., Skokie, Ill.
Industrial gages; dial indicating thermometers; needle valves; refrigeration regulating valves; heating specialties
(See advertisement on page 173)

Marshall Co., C. & E., 1445 West Jackson Blvd., Chicago 80, Ill.
Manufacturers and distributors of jewelers', watchmakers' and engravers supplies

Marshall Co., L. H., Station B, Columbus, Ohio
Thermocouples

Marshall Instruments, Inc., 6859 Tujunga Ave., No. Hollywood, Calif.
Dial and special-type thermometers
(See advertisement on page 220)

Marshalltown Mfg. Co., 800 E. Nevada St., Marshalltown, Iowa
Pressure gages and indicating thermometers
(See advertisement on page 175)

Martin & Co., H. S., 1916 Greenleaf St., Evanston, Ill.
Laboratory apparatus; glass and quartz components; voltage regulators

Martin-Decker Corp., 3431 Cherry Ave., Long Beach 7, Calif.
Industrial scales; tensiometers

Martindale Electric Co., Box 617, Edgewater Branch Cleveland 7, Ohio
Testing and repair instruments and equipment for electric motors and generators

Marvel Engineering Co., 7227 N. Hamlin Ave., Chicago 45, Ill.
Filters for hydraulic oils; coolants; lubricants; and low pressure circulating systems

Marx Co., Clarence J., P. O. Box 4033, Cleveland 23, Ohio
Speed measuring instruments
(See advertisement on page 208)

Maryland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md.

Maryland Etching Co., Eudowood Lane, Towson 4, Md.

Mason Electric Corp., 3839 Verdugo Rd., Los Angeles 65, Calif.
Rotary and toggle switches

Mason Instrument Co., 29 Elm Ave., Mt. Vernon, N. Y.
Optical pyrometers; furnace temperature controls

Mason-Neilan Division, Worthington Corp., 55 Nahatan St., Norwood, Mass.
Industrial control equipment for pressure, temperature, flow, liquid level, combustion and ratio; diaphragm control valves; pressure and vacuum regulators; level controllers; pump speed governors; pump pressure regulators; pipe strainers

(See advertisement on page 243)

Mass Instruments, 84-51 Beverly Rd., Kew Gardens 15, L. I., N. Y.
Photoelectric colorimeters, photometers

Massa Laboratories Inc., 5 Fottler Rd., Hingham, Mass.
Electroacoustic instruments

Master Electric Co., 126 Davis Ave., Dayton 1, Ohio
Electric motors; gearmotors; variable speed drives; unibrake motors; fluid-drive motors

Matisa Equipment Corp., 1020 Washington Ave., Chicago Heights, Ill.
Aircraft instruments; process measurement and control instruments

Matthews Instrument Co., 1350 Burlington Ave., Bristol, Conn.
Odometers

Maurer, Inc., J. A., 37-01 31 St. Long Island City 1, N. Y.
Motion picture cameras

Maveg Machine Sales Association, Chamber of Commerce Bldg., Long Island City, N. Y.
Dilatometers; dual comparators

Maxson Corp., W. L. 475 Tenth Ave., New York 18, N. Y.
Aircraft instruments; computing machines; integrators; gyro stabilizers; aircraft and naval current controls

Maxson Instrument Div. of W. L. Maxson Corp., 47-37 Austell Place, Long Island City 1, N. Y.
Flowmeters; phasemeters; power oscillators; IF amplifirs; accelerometers; acceleration-sensitive switches

Mayer Co., George J., 546 E. Market St., Indianapolis 4, Ind.

Maymer Corp., 1961 W. 112th St., Cleveland 2, Ohio
Scales, dials and name plates

(See advertisement on page 146)

Mayne Products Co., 324 Harries Bldg., Dayton 2, Ohio

McAlear Manufacturing Co., 1901 S. Western Ave., Chicago 8, Ill.
Pressure regulators, diaphragm control valves; float valves; special valves; pipeline strainers

McCoy Electronics Co., Mt. Holly Springs, Pa.
Crystals; crystal ovens

McDanel Refractory Porcelain Co., 510 Ninth Avenue, Beaver Falls, Pa.
Porcelain insulators, components; pyrometers

McDonnell & Miller, Inc., 3500 N. Spaulding Ave., Chicago 18, Ill.
Float-operated switches; float-operated valves; pressure actuated valves

McDonnell Odometers Co., 3501 So. Kedzie Ave., Chicago 32, Ill.
Counters

McFarlin Co., 29 West Marion Ave., Youngstown 2, Ohio
Leak detectors

McGill Mfg. Co., Inc., Valparaiso, Ind.

McLean Engineering Labs, Princeton, N. J.
(See advertisement on page 18)

McKenna Lab., 2503 Main St., Santa Monica, Calif.
Ultrasonic equipment

McKesson & Robbins, Inc., 1706 First Ave., Birmingham 3, Ala.
Laboratory supplies

McNeill Engineering Co., 4057 West Van Buren St., Chicago 24, Ill.
Smoke alarms

McPherson Precision Instruments, Paul M., 527 Main St., Acton, Mass.
Laboratory supply house

MeShan Development Corp., 63 Cutter Mill Road, Great Neck, L. I., N. Y.
Audio frequency standards; filters; components

Mead Specialties Co., 4114 North Knox Ave., Chicago 41, Ill.
Air cylinders; valves; impact hammers; timers; work feeders

Measurements Corp., Boonton, N. J.
Radio frequency testing and measuring devices

(See advertisement on page 203)

Mechanical Industries Production Co., 217 Ash St., Akron 3, Ohio
Thermostats

Mechanical Products Corp., 168 N. Ogden Ave., Chicago 7, Ill.
Metering pumps; automatic dispensers

Mechaponents Division, Servomechanisms, Inc., 1000 El Segundo Blvd., Hawthorne, Calif.
Miniature and sub-miniature transformers, filters and coils

Mechtronics Co., 423 W. Coulter St., Philadelphia 44, Pa.
Special automated devices; engineering services

Meck Industries, John, Plymouth, Ind.

Medical Electronics Development Co., 400 Northern Blvd., Great Neck, L. I., N. Y.
Objective blood pressure measuring instruments; instruments for medicine

Mega Research, P. O. Box 371, Dover, N. Y.
Computers; integrators; voltage regulators

Meikle Manufacturing Co., 1335 S. MacArthur Blvd., Springfield, Ill.
Pivots and staffs for meters

Meletron Corp., 950 N. Highland Ave., Los Angeles 38, Calif.
Pressure operated switches

Menlo Research Lab., 538 Phelan Ave., San Jose, Calif.
Nucleonic and ultraviolet instrumentation and components; grain testers

Mepco Inc., 37 Abbett Ave., Morristown, N. J.
Standard and special resistors

Mercoid Corp., 4201 Belmont Ave., Chicago 41, Ill.
General purpose, weather-resistant, explosion-proof, mercury-switch equipped controls for pressure, differential pressure, temperature, liquid level, mechanical movement; transformer relays

(See advertisement on page 173)

Mercon Regulator Co., 2357 N. 29th St., Milwaukee 10, Wis.
Power plant specialties in regulation of pressure, level, rate of flow, proportioning and temperature

Mercury Contacts, Inc., P. O. Box 615, Far Hills Station, Dayton 9, Ohio
Relays and switches

Mercury Electronic Co., Box 450 B, Red Bank, N. J.

Mercury Glass Co., Pleasantville, N. J
Glass tubing

Meriam Instrument Co., 10920 Madison Ave., Cleveland 2, Ohio
Manometers; accessories; specialized processing of manometric fluids

(See advertisement on pages 164, 234)

Merit Transformer Corp., 4427 N. Clark St., Chicago, Ill.
Transformers, coils and reactors, electrical windings

Merkle Korff Gear Co., 214 North Morgan St., Chicago 7, Ill.
Motorized speed reducers; induction, synchronous, reversing, dc universal motors

Merkle-Metal Products Co., 1010 W. Lake Street, Chicago 7, Illinois

Merrick Scale Mfg. Co., 180-186 Autumn St., Passaic, N. J.
Automatic continuous weighing machines

Merritt Engrg. & Sales Co., Inc., 120 S. Niagara St., Lockport, N. Y.
Consistency controls

Merry Instrument Co., 138 Allen St., Buffalo 1, N. Y.
Optical components, systems and machines

Merz Engineering Inc., 200 S. Harding St., Indianapolis 7, Ind.
Gages and gaging fixtures

Metal & Alloy Specialties Co., Inc., 1875 Elmwood Ave., Buffalo 7, N. Y.

Metal Craft Co., 1630 E. 40th St., Cleveland 3, Ohio
Aluminum and steel electronic instrument tube-testing carrying cases; aluminum cases for traffic signal equipment

Metal & Thermit Corp., Rahway, N. J.
Aluminum, brass, copper, steel, stainless steel, Monel, nickel, and Inconel products

Metal Specialty Co., B & O and Este Ave., Cincinnati, Ohio

Metal Textile Corp., Electronics Div., Roselle, N. J.
Filters; shock mounts; separators; RF shielding gaskets

Metalab Equipment Co., Div. of Norbute Co., 270 Duffy Ave., Hicksville, L. I., N. Y.
Laboratory furniture

Metalphoto Corp., 2903 E. 79th St., Cleveland 4, Ohio
Photosensitive anodized aluminum plates; dial faces; fluorescent chemicals

Metalsalts Corp., 200 Wagraw Rd., Hawthorne, N. J.
Mercury

Metavac, Inc., 45-68 162 St., Flushing 58, N. Y.
Precision electronic components: wave guide resistance elements; metallized glass attenuator plates; disc and coaxial resistors; optical coatings (reflective, non-reflective)

Meters, Incorporated, 5353 N. Keystone Ave., Indianapolis 20, Ind.
Electrical indicating instruments

Metlab Co., 1000 E. Mermaid Lane, Philadelphia 18, Pa.

Metrogram Corp. of America, P. O. Box 137, Burlington, Vt.
Automatic check weighing machines; over and under indicating scales

Metron Instrument Co., 432 Lincoln St., Denver 9, Colo.
Comparator gages; electric tachometers; timers; chronographs

Metzger & Son, F. F., 2600 N. 6th St., Philadelphia 33, Pa.
Extensometers and gages

Meyer-Opticraft, 39 W. 60th, New York 23, N. Y.

Meyer Governor Co., 284 Baker Bldg., Minneapolis 2, Minn.
Long-distance recording, indicating, and contact making instruments; gage pulsation protectors

Meyer Scientific Supply Co., Inc., 221 Atlantic Ave., Brooklyn 2, N. Y.
Laboratory apparatus

Meyercord Co., 5323 W. Lake St., Chicago 44, Ill.

Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.

Micamold Electronics Manufacturing Corp., 1087 Flushing Ave., Brooklyn 37, N. Y.
Capacitors; filters; delay lines

Michigan Electronics, Inc., 854 N. Rockwell St., Chicago 22, Ill.
Tape recorders; components

Michigan Tool Co., 7171 E. McNichols Rd., Detroit 12, Mich.
Machines for gear forming

Mico Instrument Co., 80 Trowbridge St., Cambridge, Mass.
Precision mechanical and electromechanical instruments and devices for laboratory, model shop, prototype department and home workshop

(See advertisement on page 155)

Micro Balancing, Inc., 191 Herricks Road, Garden City Park, L. I. 14, N. Y.

Micro-Circuits Co., New Buffalo, Mich.
Electrically conductive coatings, etch and solder dip resist coatings for shielding and printed circuits

Micro Gee Products, Inc., 6100 W. Slauson Ave., Culver City, Calif.
Simulation tables; signal simulators

Micro Master Co., 2733 N. Pulaski Rd., Chicago 39, Ill.
Dial indicators and taper gages

Micro Metallic Corp., 30 Sea Cliff Ave., Glen Cove, N. Y.

Corrosion-resistant filter media; chemical, petrochemical, pharmaceutical filters

Micro Metric Instrument Co., 21509 McCracken Rd., Box 884, Cleveland 22, Ohio
Chemical and biological instruments

Micro-Poise Engrg. & Sales Co., 14851 Grand River Ave., Detroit 27, Mich.
Balancing machines

Micro Switch Div., Minneapolis-Honeywell Regulator Co., Spring Street, Freeport, Illinois
Snap action switches; mercury switches

Microchemical Service, 44-27 Douglaston Pkway., Douglaston, N. Y.
Laboratory equipment

Microchemical Specialties Co., 1834 University Ave., Berkeley 3, Calif.
Laboratory apparatus; components

Microdot, Inc., 220 Pasadena Ave., South Pasadena, Calif.
Miniature coaxial cables, connectors, and assemblies; teflon cables

Microloc Corp., 5300 104th St., Los Angeles 45, Calif.
Aircraft instruments

Micromat Co., 548 Piermont Ave., Hillsdale, N. J.

Micrometrical Manufacturing Co., 345 S. Main St., Ann Arbor, Mich.
Surface finish gages; bearing testers

Micron Gear Manufacturing Co., 102-38 Corona Ave., Corona, L. I., N. Y.
Instrument gears

Microphase Corp., P. O. Box 1116, Greenwich, Conn.
R-f filters

Microtech Corp., 200 W. Colorado St., Pasadena 1, Calif.
Precision ground, instrument and miniature ball bearings

Microtech Services Co., Box 121, Berkeley, Calif.
Ultramicro balances

Microtran Company, Division of Crest Laboratories, Inc., 145 E. Mineola Ave., Valley Stream, L. I., N. Y.
Miniaturized transformers and reactors

Mircowave Assocs., Inc., Burlington, Mass.
Microwave instruments

Mid-Century Instrumatic Corp., 611 Broadway, New York 12, N. Y.
Electronic computers; multipliers; recording oscillographs

Mid-West Dynamometer & Engrg. Co., 3100 River Road, River Grove, Ill.
Dynamometers

Midwestern Instruments, 3401 So. Harvard, Tulsa, Okla.
Geophysical instruments; amplifiers; galvanometers

Mil Instrument Corp., 92-15 172nd St., Jamaica, L. I., N. Y.
Electrical indicating instruments; galvanometers

Miljan, Inc., Box 396, 15506 S. Lakewood Blvd., Paramount, Calif.

Mill-Rose Co., 1985 E. 59th St., Cleveland 3, Ohio
Brushes for cleaning

Millen Mfg. Co., James, 150 Exchange St., Malden 48, Mass.
Radio test instruments; special electronic components

Miller Dial and Name Plate Co., 4400 N. Temple City Blvd., El Monte, Calif.
Etched, lithographed, and silk screened nameplates and panels; edge-lighted panels

Miller-Harris Instrument Co., 601 E. Ogden Ave., Milwaukee 2, Wis.
Automatic time controllers

Miller, M. C., Box 721, Allendale, N. J.
Electrical instruments

Miller Labs., August E., 9226 Hudson Blvd., N. Bergen, N. J.

Miller-Robinson Co., 7007 Avalon Blvd., Los Angeles, Calif.
Pressure switches for specialized applications involving unusual conditions of G-loading or vibration; special Bourdon tube design and fabrication

Miller & Sons, R. F., Harvard, Nebr.
Fault-locating instruments

Millers Falls Co., 57 Wells St., Greenfield, Mass.
Machine shop gages; power tools

Millitest Co., 88 Madison Ave., Hempstead, L. I., N. Y.

Millivac Instruments Corp., 2315 Second Ave., Carmen P. O. Box 997, Schenectady 6, N. Y.
Special electronic instruments

Milo Radio & Electronics Corp., 200 Greenwich St., New York 7, N. Y.
Electronic equipment distributor

Milsco Mfg. Co., 2758 N. 33 St., Milwaukee 10, Wisc.

MinAtron Corp., 3 Cliveden Place, Belle Meade, N. J.
Differential transformers; impulse generators; instrumentation systems

Minco Products, Inc., 740 Washington Ave., North, Minneaplois 1, Minn.
Potentiometers; resistance temperature sensors; test equipment

Mine Safety Appliances Co., 201 N. Braddock St., Pittsburgh 8, Pa.
Instruments for air pollution, gas analysis, humidity, sound
(See advertisement on Back Cover)

Mine & Smelter Supply Co., 1422-17th St., Denver, Colo.
Industrial equipment and supplies

Minitee, 5423 Delaware Ave., Los Angeles 41, Calif.
Thermal switches

Minneapolis Elect. & Construction Co., 80 South 12th St., Minneapolis 4, Minn.
Wire length measuring machines

Minneapolis-Honeywell Reg. Co., Indus. Div., Wayne & Windrim Aves., Philadelphia 44, Pa.
Thermocouple and optical pyrometers; resistance thermometers; pressure thermometers; pressure gages; flow meters; liquid level gages; hygrometers; CO_2 meters; control systems (electric, air-operated, and combined electric and air-operated); combustion safety controls; moisture content recorders and controllers; furnace atmosphere recorders

Minneapolis-Honeywell Reg. Co., Boston Div., 1400 Soldiers Field Rd., Boston 35, Mass.
Rate gyros; cageable free gyros; microsyns; servomotors; synchros; and other specialized electromechanical and electronic instruments for measurement and control

Minnesota Electronics Corp., (See Librascope, Burbank Div.)

Minnesota Mining & Manufacturing Co., 900 Fauquier Ave., St. Paul 6, Minn.
Magnetic tape recorders, wide-band

Mira Scientific Instruments, 2656 N. Pasadena Ave., Los Angeles 31, Calif.
Gas analyzers; electrical and electronic instrumentation; components

Mitchell Camera Corp., 666 W. Harvard St., Glendale 4, Calif.
Scientific motion picture cameras; components

Mitchell Industries, Inc., P. O. Box 17, Mineral Wells, Texas

Mitchell Radiation Prods. Corp., P. O. Box 70, Norristown, Pa.
X-ray apparatus

Mixing Equipment Co., Inc., 135 Mt. Read Blvd., Rochester 11, N. Y.
Laboratory apparatus

Model Engineering & Mfg. Co., 2800 N. Milwaukee Ave., Chicago 18, Ill.
Resistors

Model Rectifier Corp., 1065 Utica, Brooklyn 25, N. Y.
Transistors; d-c power supplies; components

Modern Electrical Laboratory, 6131 S. Wentworth Ave., Chicago 21, Ill.
Laboratory apparatus

Modern Laboratory Equipment, Co. Inc., 1809-11 First Ave., New York 28, N. Y.
Constant-temperature equipment; oven; water baths; walk-in rooms; humidity refrigerated cabinets

Modern Metalcraft, 5001 Eastman Rd., Midland, Mich.
Metering and proportioning pumps; dual syringe feeders

Modernair Corp., 400 Preda St., San Leandro, Calif.
Cylinders and valves for air, water or oil hydraulic service; special fluid power components and packaged devices for automation

Modev Co., 1825 Ravenwood Ave., Dayton, Ohio

Moeller Instrument Co., 132nd St., & 89th Ave., Richmond Hill, N. Y.
Thermometers; hydrometers; hygrometers; psychrometers; mercury column vacuum gages
(See advertisement on page 221)

Mohawk Electronic Research Labs., R. D. 4, Amsterdam, N. Y.
Electrical and electronic instrumentation

Moisture Register Co., P. O. Box 910, Alhambra, Calif.
Moisture testing instruments and devices

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
Radiosondes; electronic equipment; components; assemblies

Moline Furniture Works, Moline, Ill.
Laboratory furniture

Monarch Manufacturing Co., 2014 N. Major Ave., Chicago 39, Ill.
Radio set testers

Monitor Controller Div., Industrial Electronics Co., Inc., 99 Grove St., Rockland, Mass.
Automatic electric motor controls

Monroe Calculating Machine Co., Inc., Electronics Div., E. Hanover Ave., Morris Plains, N. J.
Digital computers; plug-in circuitry

Monsanto Chemical Co., 1700 S. Second St., St. Louis 4, Mo.

Monsell, J. R., Pitman, N. J.
Dynamometers

Montgomery Mfg. Co., 202-204 Main St., Owensville, Ind.
Program clocks

MINIATURE SCREWS
NUTS, WASHERS, TAPS, DIES, DRILLS, GAGES and TURNED PARTS

000-120, 00-96, 00-90, 0-80, 1-72, 2-56 from stock. Specials made to order from 56 to 160 TPI and metric and small parts in all metals. Send prints for quotations on quantities from one dozen to large runs. Prompt service and close inspection assure complete satisfaction. Plating, heat treating, second operations also available.

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Electrohydraulic servo components and control systems

Moore & Co., Samuel, DeKoron Products Div., Mantua, Ohio
Plastic-coated metal tubing; multiple tube harnesses; junction boxes; grommets
(See advertisement on page 46)

Moore Company, H. R., 200 W. Montgomery Ave., Hatboro, Pa.
Paint and film testing instruments; viscometers

Moore Corporation, John B., Peerless Bldg., P. O: Box 3, Nutley 10, N. J.
Instrument cleaning compounds and associated equipment

Moore Products Co., 901 E. Lycoming St., Philadelphia 24, Pa.
Industrial instruments

Moraine Products Div., General Motors Corp., 1420 Wisconsin Blvd., Dayton 1, Ohio
Sintered metal powder filters; flame arrestors; bearings and structural parts; bi-metal bushings and washers

Moran Instrument Corp., 170 E. Orange Grove Ave., Pasadena 3, Calif.
Airborne and car mounted scintillation counters; portable electronic surveying systems

Morehouse Machine Co., 233 W. Market St., York, Pa.
Force measuring calibration equipment

Morganite, Inc., 3302-3320 48th Ave., Long Island City 1, N. Y.
Pyrometer tubes

Morrill & Morrill, 30 Church St., New York 7, N. Y.

Morris Co., J. I., 384 Elm St., Southbridge, Mass.
(See advertisement on page 282)

Moseley Co., F. L. 409 N. Fair Oaks Ave., Pasadena 3, Calif.
Two-axis ("X-Y") recorders; control drives
(See advertisement on page 253)

Moser Jewel Co., P. O. Box 150, Perth Amboy, N. J.
Jewel bearings for electrical, aircraft, mechanical and marine instruments; steel and osmium tipped pivots
(See advertisement on page 123)

Moss & Co., Henry, 113-53rd St., Brooklyn 3, N. Y.

Mossman, Inc., Donald P., P. O. Box 265, Brewster, N. Y.
Lever, push button and turn switches

Motordyne Inc., 2661 S. Myrtle Ave., Monrovia, Calif.
Fractional-hp, ac and dc motors

Motson Co., J. Frank, 1717 Bethlehem Pike, Flourtown, Pa.
Printing on plastics, glass, metals, ceramics, etc., printed circuits

Mt. Sopris Instrument, 1320 Pearl St., Boulder, Colo.
Geophysical and nucleonic instruments

Mountain Systems Inc., 864 Franklin Ave., Thornwood, N. Y.
Digital computers; data handling systems; and processing equipment

Mucon Corporation, 9 St., Francis St., Newark 5, N. J.
Subminature ceramic capacitors.

Mueller Co., Decatur, Ill.

Regulators; strainers; relief valves; non-lubricated plug valves

Mueller Electric Co., 1583 E. 31st St., Cleveland 14, Ohio
Electrical test clips; alligator clips; insulators; C ground clips

Mueller Laboratory, 1052 N. Allen Ave., Pasadena, Calif.
Dimensional gages; magnetic counters; laboratory supply house

Muirhead Instrument Co., 677 Fifth Ave., New York 22, N. Y.
Precision electrical and electronic instruments: synchros; synchro test apparatus; magslips; ship stabilizer gyro control gear; facsimile telegraph apparatus

Mullen Tester Div., see Perkins and Son, Inc., B. F.
Mullenbach Div., Electric Machinery Manufacturing Co., 2100 E. 27th St., Los Angeles 58, Calif.
Electro-strictive relays and actuators; packaged instrumentation panels and controls; power resistors packaged motor control systems

Multi-Amp Corp., 465 Lehigh Ave., Union, N. J.
Portable and bench-type high current test equipment

Municipal Instrument Co., 3246 S. Cuyler Ave., Berwyn, Ill.
Magnetic dipping needles; pipe phone for checking leaks

Munsell Color Co., Inc., 10 E. Franklin St., Baltimore 2, Md.
Color comparators; color standards

Munston Mfg. & Service, Inc., Beech St., Islip, L. I., N. Y.

Murphy & Miller, Inc., 1326 So. Michigan Ave., Chicago 5, Ill.
Environmental test equipment to simulate low temperature, high temperature, humidity, altitude; air dryers; temperature baths
(See advertisement on page 96)

Mutual Industries, 1027 N. Seward St., Los Angeles, Calif.

Mutual Electronic Indust. Corp., 85 Beechwood Ave., New Rochelle, N. Y.

Mycalex Corp. of America, Clifton Blvd., Clifton, N. J.
Tube sockets; insulating materials

Myer Corp., Acra-Ment Gage Div., 633 Park Ave., Cranston, R. I.
Dimensional gages and fixtures

N

NJE Corp., 345 Carnegie Ave., Kenilworth, N. J.
Power supplies, including transistor; pulse generators; battery eliminators

NRD Instrument Co., 6425 Etzel Ave., St. Louis 14, Mo.
Radiation detecting and counting instruments

NRC Equipment Corp., 160 Charlemont St., Newton Highlands 61, Mass.
High-vacuum components; equipment systems; gages; valves; mechanical diffusion pumps; seals; furnaces; impregnators driers; leak detectors

NYT Electronics, Inc., 2979 N. Ontario St., Burbank, Calif.

Nader Manufacturing Co., 2661 S. Myrtle Ave., Monrovia, Calif.
Transistorized dc transformers; centrifugal governors for fractional-hp motors; miniature motor overload switches

Nalley Co., Leonard L., 9203 E. Rosecrans Blvd., Bellflower, Calif.
Electric analog computers; complex-wave generators; fire-control instruments; amplifiers; power supplies

Nankervis Co., G. L., 15310 Fullerton Ave., Detroit 27, Mich.
Test equipment; flowmeters; viscometers; and special testing devices for aircraft, automotive and chemical industries.

Narda Microwave Corp., 160 Herricks Rd., Mineola, L. I., N. Y.
Microwave and high-frequency equipment; thermistors

Nash Engineering Co., 370 Wilson Road, South Norwalk, Conn.
Instrument air compressors
(See advertisement on page 51)

Nashville Surgical Supply Co., 401 Church St., Nashville 3, Tenn.

National Aircraft Corp., 3411 Tulare Ave., Burbank, Calif.
Electronic systems, components; semi-conductor devices; aircraft accessories; aircraft modification

National Appliance Co., 7634 S. W. Capitol Hwy., Portland 19, Ore.
Constant temperature baths, gravity and mechanical convection ovens; laboratory apparatus

National Automatic Products Co., Washington Ave., Berlin, Conn.
Precision aircraft engine parts

National Brass Co., 1600 Madison St., S. E., Grand Rapids 2, Mich.
Combustion and draft controllers
National Carbon Co., A Division of Union Carbide Corp., 30 E. 42 St., New York 17, N. Y.
Dry batteries

National Cash Register Co., Main & K Sts., Dayton 9, Ohio
Computers; business machine supplies

National Co., Inc., 61 Sherman St., Malden, 48 Mass.
Communications electronic systems; equipment components

National Controls, Inc., 400 Homer St., Newton Center, Mass.
Valves; humidity controllers; thermostats

National Cylinder Gas Co., 840 N. Michigan Ave., Chicago 11, Ill.

National Decalcomania Corp., 236 N. 60 St., Philadelphia 39, Pa.

National Electric Controller Co., 7070 Glenwood Ave., Chicago 26, Ill.
Rheostats

National Electric Instrument Co., Inc., 92-21 Corona Ave., Elmhurst 73, N. Y.
Bore inspection equipment; telescopes

National Electronics, Inc., 628 North St., Geneva, Ill.

National Engineering Products, Inc., Washington Bldg., Washington 5, D. C.
Pressure gage equalizers

National Instrument Co., 246 Walnut St., Newtonville 60, Mass.
Electromechanical instruments and devices

National Instrument Co., 2701 Rockwood, Baltimore 15, Md.
Automatic pipettes

National Instrument Labs., Inc., 6108 1st Rhode Is. Ave., Riverdale, Md.
Pneumatic, electronic, and biomedical equipment
(See advertisement on pages 4, 283)

National Mailing Bag Co., 291 Hendrix St., Brooklyn 7, N. Y.

National Pneumatic Co., Inc., Industrial Div., 125 Amory St., Boston, Mass.
Fractional-hp, miniature and servo motors

National Pneumatic Co., Inc., Holtzer-Cabot Div., 920 Lexington Ave., New York 17, N. Y.

National Radiac, Inc., 475 Washington St., Newark 2, N. J.
Scientillation crystals; scientillation counter heads; nuclear electronic instrumentation

National Research Corp., 70 Memorial Drive, Cambridge 42, Mass.
Optical products, high vacuum apparatus

National Scientific Co., 2204 W. North Ave., Chicago 47, Ill.
Laboratory supply house

National Spectrographic Labs., Inc., 6300 Euclid Ave., Cleveland 3, Ohio
Spectrographs; spectroscopes; microdensitometers; testing devices

National Tel-Tronics Corp., 33 St. Casimir Ave., Yonkers, N. Y.
Dial lights; connectors, plugs, clips, etc.

National Time & Signal Corp., 21800 Wyoming Ave., Detroit 37, Mich.
Timers for welding and industrial process control

National Vulcanized Fibre Co., P.O. Box 311, Wilmington 99, Delaware

Natural Gas Equipment, Inc., 804 S. Fair Oaks Ave., P. O. Box 2297-D, Pasadena 2, Calif.
Automatic-control systems, pneumatically actuated valves, control panels

Naybor Laboratories, 2 Yennicock Ave., Port Washington, N. Y.
Time delay relays

Neff Instrument Corp., 2211 E. Foothill Blvd., Pasadena, Calif.

Negus, T. S. & J. D., 69 Pearl St., New York 4, N. Y.
Nautical instruments

Neider Fused Quartz Co., 90 Broad St., Babson Park Boston 57, Mass.
Optical flats; quartz apparatus and components

Neise, Karl A., 404 Fourth Ave., New York 16, N. Y.
Dimensional gaging equipment

Nelson Electric Mfg. Co., 4041 S. Sheridan P. O. Box 5385, Tulsa 16, Okla.

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Nelson Instrument Co., 607 Howard St., Evanston, Ill.
Custom designers and consultants for control equipment, systems, and installations

Nelson Section Liner Co., 229 W. Gardner St., DeKalb, Ill.
Drawing instruments

Nelson & Street, 11705 Highview Ave., Kensington, Md.
Chronographs; timers

Nems-Clarke, Inc., 919 Jesup Blair Dr., Silver Spring, Md.

Neon Claude, Inc., 25 W. 43rd St., New York, N. Y.
Transformers and electrical apparatus

Neptune Meter Co., 19 W. 50th St., New York 20, N. Y.
Liquid meters; gas meters

Neptune Pump Mfg. Co., 4912 N. 6 St., Philadelphia 20, Pa.
Metering and proportioning pumps; chemical feeders

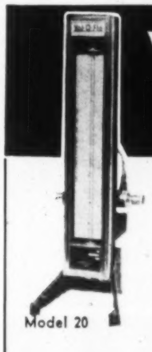
Nester Company, Inc., L. G., Millville, N. J.
Laboratory apparatus; industrial glassware to customer's specifications
(See advertisement on page 116)

Nester Engineering Co., 24 Chestnut St., Rutherford, N. J.

Neutronic Associates, 93-14 101st Ave., Ozone Park 17, N. Y.
Power supplies
(See advertisement on page 162)

Neutronics Res. Co., 165 Lake St., Waltham, Mass.
Ultraviolet microscopy; simple digital deadout; R&D countermeasures; D-amplifiers; proximaty fuses

New Brunswick Scientific Co., Somerset St., P. O. Box 606, New Brunswick, N. J.



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For Laboratory Plant Special Equipment
ACCURATE • RUGGED • ADAPTABLE

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RIVERDALE, MD.

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Metal-clad and unclad plastic laminates

New England Oven & Furnace Co., 385 Boston Post Rd., Orange, Conn.
Standard and custom-built industrial ovens and dryers

New Hampshire Ball Bearings, Inc., 20 Grove St., Peterborough, N. H.
Miniature ball bearings

New Haven Clock Co., 133 Hamilton St., New Haven 4, Conn.
Capacitors; clock timers

New Hermes Engraving Machine Corp., 13-19 University Place, New York 3, N. Y.
Engraving machines
(See advertisement on page 155)

New Jersey Jeweler's Supply House, 280 Plane St., Newark 2, N. J.

New Jersey Laboratory Supply Co., 235 Plane St., Newark, N. J.
Laboratory supplies

New Jersey Meter Co., Plainfield, N. J.
Compressed air meters; separators for removing water and oil from compressed air lines; liquid flow indicators with low flow signaling circuit

New Jersey Zinc Co., 160 Front St., New York 7, N. Y.

New London Instrument Co., Inc., 82 Union St., New London, Conn.
Electronic instruments; high-frequency instruments; signal generators

N. Y. Laboratory Supply Co., Inc., 76 Varick St., New York 13, N. Y.
Laboratory supplies

New York Rubber Corp., 100 Park Ave., New York 17, N. Y.

New York Scientific Supply Co., 28 West 30 West, New York 1, N. Y.
Laboratory supplies

New York Transformer Co., Alpha, N. J.
Transformers

Newage Industries, Inc., 222 York Rd., Jenkintown, Pa.
Hardness testers

Newall Mfg. Co., 139 N. Wabash Ave., Chicago 2, Ill.
Precision tools; jewel bearings

Newark Electric Co., 223 W. Madison St., Chicago 6, Ill.
Electrical and electronic instruments and supplies

Newark Scale Works, 10-12 Hobson St., Newark 8, N. J.
Scales

Newmatic Corp., West Hartford, Conn.
Pressure and flow measurement and control instrumentation; timers; switches; laboratory presses

Newton Co., 55 Elm St., Manchester, Conn.
Control and data processing systems and components

Ney Co., J. M., P. O. Box 990, Hartford 1, Conn.

Niagara Blower Co., 405 Lexington Ave., New York, N. Y.
Air engineering equipment
(See advertisement on page 52)

Niagara Electrical Instrument Co., 45 Allen St., Buffalo, N. Y.
Electrical power analyzer

Nichols, Lyman, Cherryhurst, Fort Collins, Colorado
Engraving and etching of metal and glass

Nichols-Morris Corp., 76 Mamaroneck Ave., White Plains, N. Y.

Nicholson & Co., W. H., 169 Oregon St., Wilkes-Barre, Pa.
Valves and traps

Nikon, Inc., 251 Fourth Ave., New York, N. Y.

Nilsen Mfg. Co., Church & Moreland, Addison, Ill.
Continuous phase shifting capacitors

Nilsson Gage Products, Inc., Div. of Bolce Gages P. O. Box 505, Poughkeepsie, N. Y.
Dimensional gages

Non-Linear Systems, Del Mar Airport, Del Mar, Calif.
Electronic and electrical instruments; digital voltmeters

Norcross Corporation, 247 Newtonville Ave., Newton 58, Mass.
Electric and electric-pneumatic viscometers

Norden-Ketay Corp., 99 Park Ave., New York, N. Y.
Pressure and vacuum instrumentation; aircraft instrumentation; military instruments; electrical and electronic components

Norgren Co., C. A. 3400 S. Elati St., Englewood, Colo.
Lubrication equipment

Norma-Hoffman Bearings Corp., Hamilton Ave., Stamford, Conn.

North American Philips Co., Inc., 100 East 42nd St., New York 17, N. Y.
X-ray diffraction and spectrographic equipment; industrial radiographic and fluoroscopic equipment; liquid air installation

North Electric Mfg. Co., 553 S. Market St., Galion, Ohio
Telephone switchboards and equipment; automatic control and electromagnetic components

North Hills Electric Co., Inc., 402 Sagamore Ave., Mineola, L. I., N. Y.
Coils; coil forms; current regulating equipment; transformers
(See advertisement on page 74)

North Shore Nameplate Inc., 214-27 Northern Blvd., Bayside 61, N. Y.
Anodized and etched aluminum foil nameplates

Northam Electronics, Inc., 2420 N. Lake Ave., Altadena, Calif.
Pressure, position, acceleration transducers; miniature magnetic tape recorders; data reduction systems

Northeast Scientific Corp., 617 Concord Ave., Cambridge 38, Mass.
Microwave instrumentation; high voltage supplies
(See advertisement on page 24)

Northrup Anaheim, Div. of Northrup Aircraft, Inc., 500 E. Orangethorpe Ave., Anaheim, Calif.
Weapons systems support equipment, armament and fire control devices

Northeastern Engrg., Inc., Manchester, N. H.
Electronic counters; spectrum analyzers; decade counters; electronic multimeters; frequency meters
(See advertisement on page 83)

Norton Electrical Instrument Co., 83 Hilliard St., Manchester, Conn.
Electrical instruments; shunts

Norwood Controls, 934 Washington St., Norwood, Mass.
Electromagnetic system for indicating, recording and/or controlling process variables; high-speed rotary switches; pressure pickups.
(See advertisement on page 167)

Nosker Engineering Products, 1216 Livermore St., Yellow Springs, Ohio
Strain measuring equipment

Nuclear-Chicago (Nuclear Instr. and Chem. Corp.) 223 W. Erie St., Chicago 10, Ill.
Radioactivity measuring and detecting instruments

Nuclear Development Corp. of America, 5 New St., White Plains, N. Y.
Nuclear reactor design, and electronic instrumentation and computer development

Nuclear Development Laboratory, P. O. Box 7034, Kansas City, Mo.
Radium detectors

Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 18, Ind.
Counting systems; scaling units; air and water monitors; portable instruments
(See advertisement on page 84)

Nuclear Research Corp., Southampton, Pa.
Radioactivity instrumentation; process measurement and control equipment

Nuclear Science & Engineering Corp., P. O. Box 10901, Pittsburgh 36, Pa.
Radioactivity instruments; level indicators

Nucleonic Co. of America, 196 Degraw St., Brooklyn, N. Y.
Radiation detectors

Nurnberg Thermometer Co., Inc., 124 Livingston St., Brooklyn 2, N. Y.
Thermometers and hydrometers—laboratory supply house

Nye, Inc., Wm. F., Box 927, New Bedford, Mass.
Instrument and watch oils

O

O. K. Machine & Tool Corp., 551 East 179th St., New York 57, N. Y.
(See advertisement on page 131)

OPW Corp., 2735 Colerain Ave., Cincinnati 25, Ohio

Oak Mfg. Co., 1250 Clybourn Ave., Chicago 10, Ill.
Radio and television parts

WIRE-LENGTH **METERS**

Olympic **Model 600 is ACCURATE • EFFICIENT**

uses VEEDER-ROOT Counter

No. 650 Cutter is optional

CAPACITY
.01" to 1" dia.

INDICATES
Feet & Inches to 9,999 feet

SPEED
to 500 feet per minute

Approved by WEIGHTS & MEASURES AUTHORITIES

Stocked by REGIONAL DISTRIBUTORS

Olympic Instrument Laboratories
Dept. 91, VASHON, WASHINGTON

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Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
Dynograph recorders, amplifiers, writers, recording systems

O'Hara Waltham Mfg. Co., 74 Rumford Ave., Waltham 54, Mass.

Ohaus Scale Corp., 1050 Commerce Ave., Union, N. J.
Analytical balances

Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio
Carbon seals; bearings; motor and generator brushes; contacts; carbon and wirewound resistors

Ohio Electric Mfg. Co., 5400 Dunham Rd., Maple Heights, Ohio

Ohmart Corp., 2236 Bogen St., Cincinnati 14, Ohio
Radioactivity gages to measure and control density, specific gravity, percent solids, level of liquids, solids and slurries

Ohmite Mfg. Co., 3601 Howard St., Skokie, Ill.
Close control rheostats, fixed and adjustable power resistors; precision and non-inductive resistors; attenuators; tap switches and r-f chokes; power relays

Oil Metering and Processing Equipment Corp., 4843 Yale Street, Houston 18, Texas
Computers, analog, electronic, digital; flowmeters

Oil Well Water Locating Co., 2230 Lemon Ave., Long Beach 6, Calif.
Oil well and refinery electronic integration of water cut in oil; automatic tank control; bleeder control; oil field automation; electronic oil gaging control

Okonite Co., Passaic, N. J.
Air and hydraulic tubing; friction and rubber tapes; electric wires, cords and cables

Oliver Instrument Co., Adrian, Mich.

Oliver Mfg. Co., W. W., 1483 Niagara St., Buffalo 13, N. Y.

Olsen Testing Machine Co., Tinius, Easton Road, Willow Grove, Pa.
Testing machines

Oltronix Co., 235 Underwood Drive, Atlanta 5, Ga.
Standard or specialty electronic instruments and precision meters for labs, industry, and wind tunnels.

Olympic Inst. Labs, Dept 91, Vashon, Washington
(See advertisement on page 284)

Olympic Metal Products Co., Inc., P. O. Box 71, Phillipsburg, N. J.
Instrument housings

Omega Machine Co., 345 Harris St., Providence R. I.
Chemical feeding equipment for dry or liquid materials; by volume or by weight

Omicron Co., P. O. Box 907, Glendale, Calif.
Beam and bow compasses; ellipsographs

O'Neil-Irwin Manufacturing Co., 554 8th Ave., Lake City, Minn.

Opad Electric Co., 69 Murray St., New York 7, N. Y.
Power supplies; electrical and electronic test instruments; components

(See advertisement on page 163)

Oppiem Co., Inc., 83 Uhland St., E. Rutherford, N. J.
Optical instruments and components; electrical and mechanical testing and measuring instruments

Optical Coating Lab., Inc., 1035 Sebastopol Rd., Santa Rosa, Calif.
Low-reflecting surface glass; lenses; mirrors

Optical Development Corp., 949 Broadway, New York 10, N. Y.
Magnifiers; microscope accessories

Optical Gaging Products, Inc., 26 Forbes St., Rochester 11, N. Y.
Dimensional gaging and inspection equipment

Optics Div., Texas Insts., Inc. 104 W. Foothill Blvd., Monrovia, Calif.
Precision optical components; prisms, lenses; windows, mirrors; reticles; systems

Optionic Research, Inc., 1374 Massachusetts Ave., Cambridge 38, Mass.
Biological instruments

Opto-Metric Tools, Inc., 137 Varick St., New York 13, N. Y.
Optical measuring instruments; comparators; contour measuring projectors; sterescopic microscopes; dividing heads; rotary tables; amplifiers; gages; micro-hardness testers.

(See advertisement on page 141)

Optron Corp., 3526 State St., Santa Barbara, Calif.
Displacement followers

Optron Laboratory, 2725 Salem Ave., Dayton 6, Ohio
Optical flats; reflectors; prisms

Orban Co., Inc., Kurt, Machine Tool Div., 34 Exchange Place, Jersey City 2, N. J.
Machine tools; mechanical recording indicators; precision gear checking equipment

Orbitran Co., P. O. Box 635, Lakeside, Calif.
Electronic test equipment, delay lines

Oregon Electronics, 2105 S.E. Sixth Ave., Portland 14, Oregon
Regulated power supplies

Ormandy & Stollery, 3 Victoria Place, Brightlingsea, Essex, England

(See advertisement on page 218)

Ornyx Company, 9015 Wilshire Blvd., Beverly Hills, Calif.
Soldering irons and transformers

Orradio Industries, Inc., Shamrock Circle, Opelika, Ala.
Magnetic tape

Orton Ceramic Foundation, Edward, Jr., 1445 Summit St., Columbus 1, Ohio
Pyrometric cones

Osborne Electric Sales Co., 712 S. E. Hawthorne Blvd., Portland 14, Oregon
Electrical components

Osby & Barton Co., Division of Flightex Fabrics, Inc., 148 W. River St., Providence 4, R. I.
Electronic instruments; precision component parts, precision tools

Oster Mfg. Co., John, Avionic Div., 1 Main St., Racine, Wisc.
Actuators; servo motors; servo motor tach generators; a-c drive motors; servomechanism assemblies; d-c motors; motor gear trains; synchros

Owen Laboratories, 55 Beacon Place, Pasadena 10, Calif.
Standard and custom strain gage power supplies; bridge balancing, calibrating, indicating equipment; transistor test sets

(See advertisement on pages 57, 63)

Owens-Illinois Glass Co., Owens-Illinois Bldg., Toledo 1, Ohio
Scientific and industrial instruments; and glass components

P

PCA Electronics Co., 2180 Colorado Ave., Santa Monica, Calif.
Transformers, pulse; delay lines; networks, pulse forming; circuits, potted, including embedded components

(See advertisement on page 229)

P-K Valve Corp., 683 Third Ave., New York 17, N. Y.
Venturi-ball type valves

PM Industries, Inc., 460 North Ave., New Rochelle, N. Y.
AC and DC motors, generators, servomotors, servomotor generators, hysteresis and synchronous motors

PSP Engineering Co., 6058 Walker Ave., Maywood, Calif.
Direct current solenoids for use in computers, gyros, and other avionic components

P-W Industries, Inc., Duncan & Melrose Sts., Philadelphia 24, Pa.
Cable and tubing supports

(See advertisement on page 232)

Pace Electrical Instruments Co., Inc., 70-31 84th St., Glendale 27, L. I., N. Y.
Electrical indicating instruments

Pace Engineering Co., 6914 Beck Ave., North Hollywood, Calif.
Thermocouple reference junctions circuit calibrators; transducers and related electronic equipment for pressure, strain, physical measurements

Pacific Automation Prods., Inc., 1000 Airway, Glendale 1, Calif.
Multi-conductor neoprene jacketed electronic cable and cable assemblies

Pacific Industrial Electronics, 252 Fifth St., San Francisco 3, Calif.
Printed circuits; special power supplies; medical instrumentation; diode test sets; microphonic manometers

Pacific Instrument Co., 3226 Randolph Ave., Oakland 2, Calif.
Electrical and electronic test instruments; components

Pacific Laboratories, 12808 Venice Blvd., Los Angeles 66, Calif.
Data recording cameras; interval timers

Pacific Optical Corp., 120 N. Glasgow St., Inglewood 1, Calif.
Optical instruments for industrial, scientific, educational and military use; optical fabrication in glass and plastic lenses

(See advertisement on page 150)

Pacific Scientific Co., Inc., 6280 Chalet Dr., Bell Gardens, Calif.
Electromechanical instruments; rate gyros; precision linear potentiometers; accelerometers

Pacific Semiconductors, Inc., 10451 W. Jefferson Blvd., Culver City, Calif.
Computer diodes subminiature, hermetically sealed glass and metal envelope; test equipment

Pacific Solenoids, Inc., 500 E. Franklin St., El Segundo, Calif.

Pacific Technical Co., 2047 Sawtelle Blvd., Los Angeles 25, Calif.

Pacific Transducer Corp., 11838 W. Pico Blvd., Los Angeles 64, Calif.
Microscopes and accessories; electrical instruments and components; ultra-violet lamps; surface temperature, recording, stem, glass and mercury thermometers; hardness testers

(See advertisement on page 220)

Pacific Universal Products Co., 168 Vista Ave., Pasadena 8, Calif.
Vacuum coatings; lenses; prisms; military optics; first surface; transparent mirrors; metalized attenuator plates; waveguide resistance elements; filters; glass components

(See advertisement on page 142)

Packard Bell-Electronics Div., 1925 S. Bundy Dr., West Los Angeles, Calif.

Packard Instrument Co., Box 428, La Grange, Ill.

Packless Metal Hose, Inc., 730 S. Columbus Ave., Mt. Vernon, N. Y.

Palm Bros. Decalcomania Co., 3684 Regent Ave., Cincinnati 12, Ohio
Decalcomanias

Palmer Thermometers, Inc., 2501 Norwood Ave., Box 125, Cincinnati 12, Ohio
Industrial indicating thermometers; mercury actuated dial and recording thermometers; laboratory and ASTM precision types

(See advertisement on page 223)

Palnut Company, Glen Road, Mountainside, N. J.
Locknuts, fasteners, and associated tools; hardware

Palo Laboratory Supplies, Inc., 81 Reade St., New York 7, N. Y.
Paper testing machines; laboratory supplies

Palo-Myers Inc., See Palo Lab. Supplies, Inc.

Palos Optical Co., Box 6, Palos Heights, Ill.
Optical instruments

Pan American Trade Dev. Corp., 2 Park Ave., New York 16, N. Y.

Pan-Technics, Ltd., P. O. Box 578, Encinitas, Calif.
Front surface mirrors

Panalarm Products, Inc., 6312 N. Broadway, Chicago 40, Ill.
Annunciator and alarm systems; liquid level indicators and recorders; relays

Panascan, Inc., 6312 N. Broadway, Chicago 40, Ill.
Process scanning and monitoring systems

Panero Mirrors Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.
Mirrors, high vacuum coatings

(See advertisement on page 141)

Panellit, Inc., 7401 N. Hamlin Ave., Skokie, Ill.
Annunciators; control panels; coordinated control systems; scanning and monitoring devices.

Panoramic Radio Products, Inc., 10 S. Second Ave., Mt. Vernon, N. Y.
Electronic instruments and inspection devices

Paper Manufacturers Co., Inc., 5th & Willow St., Philadelphia 23, Pa.

Par-Metal Products Corp., 32-62 49th St., Long Island City 3, N. Y.
Relay racks; cabinets; utility desk assemblies

Para Laboratory Supply Co., 221 N. Hermitage Ave., Trenton 8, N. J.
Laboratory supply house

Paragon Electric Co., 1600 12th St., Two Rivers, Wis.
Time controls, industrial and commercial

Parameters, Inc., 195 Herricks Rd., New Hyde Park, N. Y.
Special test equipment for hydraulics and electronics

Paramount Paper Tube Corp., 614 S. Lafayette St., Fort Wayne 2, Ind.
Spiral wound paper tubing

Parisian Novelty Co., 3510 S. Western Ave., Chicago 9, Ill.

Park Nameplate Co., Inc., 34-10 Linden Pl., Flushing 54, L. I., N. Y.
Anodized, pressure sensitive aluminum nameplates; instruction plates; decorative trim

Parker Appliance Co., 17325 Euclid Ave., Cleveland 12, Ohio
Tube & hose fittings; synthetic rubber O-rings; custom-molded parts; unicellular floats

(See advertisement on pages 32-33)

Parker-Hartford Corp., 650 Franklin Ave., Hartford, Conn.
2-dimensional, 3-dimensional cams for jet-aircraft instrument and fuel control systems; engraving; marking tools; dies

Parr Instrument Co., 211-53 St., Moline, Ill.
Combustion bombs; calorimeters; hydrogenation apparatus; melting point apparatus

Parr Manufacturing Corp., 44 Austin St., Newark 2, N. J.
Electrical ground detectors; fault locators

(See advertisement on page 117)

Parsons Co., Ralph M., Electronics Div., 151 De-Lacey Ave., Pasadena, California
Electronic instrumentation systems and components for aircraft, missile research, and flight testing

Partlow Corp., 2 Campion Rd., New Hartford, N. Y.
Temperature indicators and controllers, thermometers process timers

Pasadena Hydraulics, Inc., 1433 Lidcombe St., El Monte, Calif.
Hydraulic presses with individually controlled heated platens up to 600°F., bench and floor models from 20 to 125 tons

(See advertisement on page 129)

Passaic Analytical Laboratories, Inc., Passaic Ave., Caldwell, N. J.
Instrument cleaning machines

Patent Button Co., Patwin Instruments Div., Waterbury 20, Conn.
Flame photometers and electro-polarizers for research, control and clinical use

Patterson Co., Wayne D., 807 Yale St., Los Angeles 12, Calif.

Patterson Screen Div., E. I. duPont de Nemours & Co., Towanda, Pa.
X-ray intensifying and fluoroscopic screens

Patton-MacGuyer Co., 17 Virginia Ave., Providence 5, R. I.

Patwin Instruments Div., see Patent Button Co.

Paul & Stein Bros., Inc., F. H., 235 Fifth Ave., New York 16, N. Y.
Electrical and electronic components

Paulstick & Sons, H., 2124 Fulton St., Brooklyn 33, N. Y.
Thermometers

Pearson Electronics, 707 Urban Lane, Palo Alto, Calif.
Very high power, high voltage pulse transformers.

Pederson Electronics, P. O. Box 572, Lafayette, Calif.
High-fidelity equipment: Am-fm tuners, 20 and 50 watt amplifiers and pre-amp-amplifier combinations

Peer, Inc., 1200-48 Milton St., Benton Harbor, Mich.

Peerless Electric Co., 1401 W. Market St., Warren, Ohio
Thermocouple restorers; fractional-hp. motors

Peerless Equipment Co., 111 Ortega Ave., Mountain View, Calif.
Electrical and mechanical counting, timing and recording devices and actuating switches

Peerless Roll & Leaf Co., Inc., Precision Rolled Metal Div., 4541 New York Ave., Union City, N. J.

Peerless Rubber Co., 4129 W. Kinzie St., Chicago 24, Ill.

Pegasus Laboratories, 3690 Eleven Mile Rd., Berkley, Mich.
Electrohydraulic servomechanisms

Pelouze Mfg. Co., 1218 Chicago Ave., Evanston, Ill.
Scales and balances

Penberthy Injector Co., Div. Buffalo-Eclipse Corp., 1242 Holden Ave., Detroit 2, Mich.
Pressure and level gages and automatic controllers; UV transmitting glass

Penberthy Instrument Co., 4301 Sixth St., Seattle 8, Washington
Industrial and smoke periscopes

Penfield Manufacturing Co., Inc., P. O. Box 792, Meriden, Conn.

Penn Brass & Copper Co., Box 338, Erie, Pa.

Penn Instruments Div., Burgess-Manning Co., 4110 Haverford Ave., Philadelphia 4, Pa.
Flow meters; Venturi-tubes; electric and pneumatic transmission summation devices

Penn Optical & Instr. Co., 19542 Bristol St., Costa Mesa, Calif.
Precision optical parts; optical instruments; interferometers; spherometers; optical benches
(See advertisement on page 149)

Penn Panel & Box Co., Willows Ave., Collingdale, Penna.
Instrument, control, graphic, electrical and pneumatic panels

Penn Precision Products, Inc., 501 Crescent Ave., Reading, Penna.
Precision rolled beryllium copper, phospor bronze, nickel, silver, brass, chromium copper, and stainless steel strip

Penna. Flexible Metallic Tubing Co., 72nd St. & Powers Lane, Philadelphia 42, Pa.

Penna. Pump & Compressor Co., Easton, Pa.
Instrument-air compressors; dry vacuum pumps

Perfex Div., General Controls Co., Iron Mountain, Mich.
Automatic temperature controls for oil burners, stokers, gas burners, refrigeration and air conditioning

Performance Measurements Corp., 15301 W. McNichols Rd., Detroit 35, Mich.
Servo null balance digital indicators for flow, temperature, voltage, resistance, etc.

Perkin-Elmer Corp., Main Ave., Norwalk, Conn.
Precision analytical laboratory and process stream instruments; optical electro-optical systems, electronic components

Perkin Engineering Corp., 345 Kansas St., El Segundo, Calif.
Regulated dc power supplies; ac line voltage regulators

Perkins & Son, Inc., B. F., Mullen Tester Div., P. O. Box 388, Holyoke, Mass.
Testers for leather, paper and textiles

Permag Corp., 210 Taafee Place, Brooklyn 5, N. Y.
Permanent magnets
(See advertisement on page 136)

Permanent Magnet Co., Inc., Indianapolis 26, Ind.
Alnico, cobalt, and chrome permanent magnets

Permo Incorporated, 6415 N. Ravenswood Ave., Chicago 26, Ill.
Instrument pivots and contacts

Permutit Company 330 W. 42nd St., New York 36, N. Y.
Water conditioning equipment; ion exchange resins; industrial waste treatment equipment; gas analyzing and indicating equipment
(See advertisement on page 112)

Peschel Electronics, Inc., 13 Garden St., New Rochelle, N. Y.
High voltage test sets (ac, dc, ac/dc); corona test sets; insulation testers, including very high voltage range
(See advertisement on page 244)

Pesco Products Co., 24700 North Miles Rd., Bedford, Ohio
Fractional-hp and geared motors; pumps

Peterson & Co., Inc., Leonard, 1222 Fullerton St., Chicago 14, Ill.
Laboratory furniture

Petrometer Corp., 43-22 10th St., Long Island City 1, N. Y.
Liquid depth indicators and controls; remote-reading specific gravity indicators; manifolding valves for pneumatic systems
(See advertisement on page 125)

Pfaltz & Bauer, Inc., 350 5th Ave., New York 1, N. Y.
Laboratory control instruments

Phalo Plastics Corp., 25 Foster St., Worcester 8, Mass.
Thermoplastic-insulated wire and cable; power supply cords; cord sets; plastic tubing wiring harnesses

Phaostron Instrument and Electronic Company, 151 Pasadena Ave., S. Pasadena, Calif.
Electric panel meters; laboratory instruments; test instruments; relays; deposited carbon resistors
(See advertisement on page 246)

Phen-Trols, Inc., 1 Circle Lane, Rutherford, N. J.
Pyrometers; thermocouples; instrument and regulating transformers

Philadelphia Gear Works, Inc., G. St. and Erie Ave., Philadelphia 34, Pa.
Speed reducers; gears; flexible couplings; automatic valve operators

Philadelphia Pump, Div. of American Meter Co., 13,500 Philmont Ave., Philadelphia, Pa.

Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
Scientific and industrial instruments

Philadelphia Thermometer Co., 6th and Cayuga Sts., Philadelphia 40, Pa.
Instruments for temperature indication, control and regulation

Philamon Labs., 90 Hopper St., Westbury, L.I., N. Y.
Tuning fork resonators and frequency standards; frequency dividers; oscillators; power amplifiers

Philbrick Researches, Inc., George A., 230 Congress St. Boston 16, Mass.
Computers and analogs

Philco Corp., Accessories Div., Tioga and C Sts., Philadelphia 34, Pa.
Electrical and electronic instrumentation; components; batteries

Philips Electronics, Inc., 750 S. Fulton Ave., Mount Vernon, N. Y

Philips Manufacturing Co., 3475 W. Touhy Ave., Chicago 45, Ill.
Vapor degreasers; instrument cleaning machines

Phillips & Co., H. A., 3255 W. Carroll Ave., Chicago 24, Ill.
Float controls; thermostatic valve controls; liquid level indicators; liquid return systems; solonoid valves

Phillips & Hiss Co., 1145 N. McCadden Place, Hollywood 38, Calif.
Precision drilling machines; pressure pickups
(See advertisement on page 128)

Phillips Control Corp., 59 W. Washington, Joliet, Ill.
Relays and solenoids

Phillips-Drucker, Route 1, Box 916B, Astoria, Oregon
Table, floor and refrigerated model centrifuges for clinical or research laboratories

Phipps and Bird, Inc., 303 S. Sixth St., Richmond 5, Va.
Laboratory apparatus and chemicals

Phoenix Die Casting Co., 21 Illinois St., Buffalo 3, N. Y.

Phoenix Precision Instrument Co., 3803 N. 5th. St., Philadelphia 40, Pa.
Light scattering photometers (molecular weight, particle size); differential refractometer; forward-scattering aerosol and smoke photometers; continuous recording differential refractometers

Phosphor Bronze Corp., 30 Franklin St., Seymour, Conn.

Photo Chemical Products, Inc., 479 Walton Ave., New York 51, N. Y.

Photo Chemical Products of Cal., Inc., 1715 Berkeley St., Santa Monica, Calif.

Photo-Crystals, Inc., 15 S. First St., Geneva, Ill.
Cadmium sulphide, photocells; humidity sensing elements

Photo Research Corp., 837 N. Cahuenga Blvd., Hollywood 38, Calif.
Optical instruments and components; brightness spot meters; color densitometers; exposure meter testers
(See advertisement on page 176)

Photobell Co., Inc., 43 Vesey St., New York 7, N. Y.
Photoelectric equipment

Photocircuits Corporation, New Street, Glen Cove, L. I., N. Y.
Printed circuits and components

Photocon Research Products, P. O. Box 5485, Pasadena, Calif.
Test equipment for measuring pressures in jet, rocket, and automotive engines; counters for guided missiles

Photogrammetry Inc., 7961 Eastern Ave. Silver Spring, Md.
Photographic and optical instruments and components

Photoplating Co., 215 N. E. 5th St., Minneapolis 13, Minn.
Aerial photo interpreting scales and rules

Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
Photo-electric elements; photometers electronic timing devices; photo-electric colorimeters; photo-electric exposure meters; densitometers

Photron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio
Oscillographs; amplifiers

Physical Research Labs., Inc., 1909 Park Ave., New York 35, N. Y.
Humidity and moisture-content measurement and automatic control

Physics Research Laboratories, P. O. Box 555, Hempstead, N. Y.
Electrical and electronic instrumentation
(See advertisement on pages 189, 245)

PIC Design Corp., 477 Atlantic Ave., East Rockaway L. I., N. Y.

Pickard & Burns, Inc., 240 Highland Ave., Needham, Mass.
Amplifiers

Picker X-Ray Corp., 25 South Broadway, White Plains, N. Y.
X-ray equipment

Pike & Co., E. W., 492 North Ave., Elizabeth 3, N. J.
Illuminated magnifiers and microscopes

Pimex, Inc., 18 E. 60th St., New York 22, N. Y.
Electric furnaces; reflecting galvanometers; standard resistances

Pioneer Electronics Corp., 2235 S. Carmelina St., W. Los Angeles 64, Calif.

Pipe Machinery Co., 930 E. 70th St., Cleveland, Ohio
Inspection gages

Pitometer Log Corp., 237 Lafayette St., New York 12, N. Y.
Pilot tube flowmeters

Pittsburgh Instrument & Machine Co., 1026 Reedsdale St., Pittsburgh 12, Pa.
Brinell machines; alternating impact machines; surveying instruments

Pittsburgh Lectrodryer Corp., Division of McGraw-Edison, P. O. Box 1766, Pittsburgh 30, Pa.
Instrument air dryers

Plamondon Magnetics Co., 1850 Hubbard St., Chicago 22, Ill.

Planet Mfg. Co., 225 Belleville Ave., Bloomfield, N. J.
Electrolytic capacitors

Plastic Capacitors, Inc., 2620 N. Clybourn, Chicago 14, Ill.
Paper and plastic dielectric capacitors; high-voltage dc power supplies; pulse forming networks; metal, glass and bakelite containers

Plastic Service Guild, 233 Condor St., East Boston 28, Mass.
Chemically resistant plastic coatings for metal

Plumb Co., Inc., D. S., 73-77 Norfolk St., Newark 3, N. J.
Pressure gage movements; water meter registers

Plummer & Kershaw, 2759 Frankford Ave., Philadelphia 34, Pa.
Optical parts

Pneumafil Corp., 2516 Wilkinson Blvd., Charlotte 8, N. C.
Vibration control equipment; mounting bases; isolators; shock mounts; electrical devices; line fault locators; voltage and current recorder accessories

Pneumatic Corp., 2516 Wilkinson Blvd., Charlotte, N. C.
Mounting bases; shockmounts; cabinets; chassis; panels

Pneumatic Scale Corp., Ltd., 72 Newport Ave., Quincy, Mass.
Automatic filling machines; scales

Pneumercator Co., Inc., 305 E. 46th St., New York, N. Y.
Liquid level indicators; mercury-column pressure indicators

Pneu-Trol Devices, Inc., 1436 N. Keating Ave., Chicago 51, Ill.
Automatic time-control systems; control valves

Podbielniak, Inc., 341 East Ohio St., Chicago 11, Ill.
Scientific and industrial laboratory apparatus

Polarad Electronics, Corp., 43-20 34th St., Long Island City 1, N. Y.

Spectrum analyzers; receivers; signal generators; sweep generators; automatic-recording titrators; electron-resonance spectrometers; rotating-cylinder viscometers

Polarized Light-Photoelastic Co., 96 Tompkins Circle, Staten Island 1, N. Y.
Photoelastic polariscopes

Polarizing Instrument Co., Buckhout St., Irvington, N. Y.
Photoelasticity apparatus

Polaroid Corp., 730 Main St., Cambridge 39, Mass.

Pollak Corp., Joseph 81 Freeport St., Boston 22. Mass.
Relays; electromechanical components
(See advertisement on page 185)

Poly-Scientific Corp., Blackburg, Virginia
Miniature slipring assemblies; miniature commutators

Polymer Corp., Reading, Pa.
Plastic stock shapes; conveyor tubing and hose; plastic molding and coating powders; coating equipment

Polyphase Instrument Co., E. Fourth St., Bridgeport, Penna.
Stress-strain recorders; electrical testing and measuring instruments; transistor testers; analyzers; components; pulse transformers; filters

Polytechnic Research & Developemnt Co., Inc., 202 Tillary St., Brooklyn 1, N. Y.
Microwave uhf-vhf test equipment and components; metal film resistors.

Poole Instruments, Inc., 150 Express St., Dallas, Texas
Instruments for inspection of physical dimensions, fluid density, and physical volume by use of sound waves

Popper & Sons, Inc., 300 Fourth Ave., New York 10, N. Y.
Liquid filling equipment; marking and printing machinery; laboratory supplies

Porter, Inc., George K., Bethlehem Pike, Hatfield, Penna.
Glass blowing; precision cylindrical, and tapered tubing

Portman Instrument Co., Town Dock Road, New Rochelle, N. Y.
Optical comparators, projectors and gages; microscopes

Posen & Kline Tube Co., Whitehall Rd. & Township Line Rd., P. O. Box 549, Norristown, Penna.
Capillary and Bourdon tubing

Post Company, Frederick, P. O. Box 803, Chicago 90, Ill.
Instruments and equipment for architects and engineers

Post Machinery Co., Electronic Products Div., 145 Elliott St., Beverly, Mass.
High speed electronic counter; lineal footage counters

Potter Aeronautical Corp., P. O. Box 532, Route No. 22, Union, N. J.
Aircraft power-plant instruments; industrial flowmeters; frequency meters

Potter Co., 1950 Sheridan Ave., North Chicago, Ill.
Capacitors

Potter & Brumfield Inc., Princeton, Ind.
Relays

Potter Instrument Co., 115 Cutter Mill Road, Great Neck, L. I., N. Y.
Electronic counting, timing, control computing, recording and digital data handling equipment; high-speed printers, magnetic data storage systems; magnistors

Power Designs, Inc., 89-25-130th St., Hill 18, N. Y.
Automatic voltage and current regulators; amplifiers; power supplies
(See advertisement on page 165)

Powers, George, 791 Tremont St., Boston 18, Mass.

Powers Regulator Co., 3400 Oakton St., Skokie, Ill.
Temperature, humidity, and pressure controllers and valves; indicators, and recorders; automatic control systems for heating and air conditioning

Powrex Switch Co., 36 Pleasant St., Watertown 72, Mass.
Mercury switches

Practo Photo Accessories Corp., 383 Pearl St., Brooklyn 1, N. Y.

Praktica Co., Inc., The, 705 Bronx River Rd., Bronxville 8, N. Y.
Cameras and accessories

Pratt & Whitney Co., Inc., Div. Niles-Bement Pond Co., West Hartford 1, Conn.
Machine shop instruments

Precise Development Corp., 2 Neil Court, Oceanside, L. I., N. Y.
Electrical and electronic instrumentation

Precise Measurements Co., 942 Kings Highway, Brooklyn 23, N. Y.
High-voltage power supplies; electrical circuit symbol stamps
(See advertisement on page 5)

Precise Products Co., 1328 Clark St., Racine, Wisc.
High speed milling machines; hardness testers

Precision Apparatus Co., Inc., 70-31 84th St., Glendale 27, L. I., N. Y.
Radio test instruments

Precision Castings Co., Inc., Drawer 1077, Syracuse 1, N. Y.

Precision Diamond Tool Co., Box 274, Elgin, Ill.
Diamond tools; grinding wheels

Precision Electronics, Inc., 9101 King St., Franklin Park, Ill.
High-fidelity pre-amplifiers; amplifiers and tuners; PA systems; electronic test instruments

Precision Gage & Tool Co., 320 East 3rd St., Dayton 2, Ohio
Machine shop gages

Precision Glass Products Co., 6138-40 Beechwood St., Philadelphia 38, Pa.
(See advertisement on page 115)

Precision Line, Inc., 63 Main St., Maynard, Mass.

Precision Manufacturing Co., 48-15 108th St., Corona 68, N. Y.

Precision Meter Co., Inc., 126 Greenpoint Ave., Brooklyn 22, N. Y.
Electrical measuring instruments

Precision Paper Tube Co., 2033 W. Charleston St., Chicago 47, Ill.

Precision Parts Co., Carter Radio Div., 213 Institute Place, Chicago 10, Ill.

Precision Products Co. Inc. of Waltham, 26 Bedford St., Waltham 54, Mass.
Hair springs and hair spring assemblies
(See advertisement on page 200)

Precision Products, Inc., 530 So. Quaker, Tulsa, Okla.
Mechanical timers; time switches; precision gears; automatic screw machine products; metal punchings

Precision Radiation Instruments, Inc., 4223 W. Jefferson Blvd., Los Angeles 16, Calif.
Geiger counters and scintillators; high fidelity tuners & amplifiers

Precision Recording Chart Co., A division of Technical Paper Co., Inc., 2430 Linden Ave., E., Linden, N. J.
Instrument charts in rolls, accordian folded, printed, punched, etc., on sensitized or unsensitized paper

Precision Resistance Co., Central Park Ave., Box 116, Yonkers, N. Y.
Fixed and variable resistors; negative-temperature-coefficient resistors

Precision Resistor Co., Inc., 109 U. S. Highway #22, Hillside 5, N. J.
Resistors
(See advertisement on page 188)

Precision Rubber Products Corp., 3110 Oakridge Dr., Dayton 7, Ohio
"O" rings; rubber washers

Precision Scientific Co., 3737 Cortland St., Chicago 47, Ill.
Standard and custom-built laboratory equipment

Precision Thermometer & Instrument Co., 1434 Brandywine St., Philadelphia 30, Pa.
Thermostats; thermoregulators; relays; barometers; hydrometer pressure gages

Precision Tube Company, Wissahickson Ave. & Church Rd., North Wales, Pa.
Fine tubing and metal shielded wire

Preco Co., 14234 Grandmont Rd., Detroit 27, Mich.
Hairsprings; precision gears; instrument staffs, pivots, pinions, etc.

Preferred Utilities Mfg. Corp., 1860 Broadway, New York, N. Y.
Boiler plant instruments

Preis Engraving Machine Co., H. P. 651 State Highway 22, Hillside, N. J.
Engraving, etching, marking and printing machines, tools and supplies

Preiser Co., Inc., B., P. O. Box 6118, Charleston 2, W. Va.
Laboratory equipment and supplies

Premier Metal Products Co., 337 Manida St., New York 59, N. Y.
Instrument chassis and cabinets
(See advertisement on page 65)

Premier Metal Works, Inc, 1616 S. Clinton St., Chicago 16, Ill.

Premier Research Laboratories, Inc., 81 Seventh Ave., New York 11, N. Y.
Quartz crystal units; frequency control crystals; ovens for electronic component stability; tourmaline crystals; crystals for transducers; crystal holders

Presin Co., 12128 W. Pico Blvd., Los Angeles 64, Calif.
Program controllers; counters; totalizers; tachometers

Pressure Products Industries, Inc., Hatboro, Pa.
Pressure instrumentation; pumps; autoclaves; valves; components

Presto Recording Corp., Paramus, N. J.
Magnetic tape recorder

Price Electric Corp., Frederick, Md.
Relays, aircraft and electronic

Printed Electronics Corp., 7 North Ave., Natick, Mass.
Printed circuits

Pritchard & Co. of Calif., J. F., 4625 Roanoke Pkwy., Kansas City 12, Mo.
Instrument air dryers

Probescope Co., 44-05 30th Ave., Long Island City 3, N. Y.
Spectrum analyzers; phase analyzers; synchronous sweep generators; miniature and multiple channel oscilloscopes
(See advertisement on page 198)

Process Control Co., 2 East End Ave., New York 21, N. Y.
Designers and builders of electrical, mechanical and electronic controls for automatic equipment and processes

Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
Electronic, optical, and mechanical instruments for industrial and research use

Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.
Coaxial transmission lines; broadcast antennas; parabolic microwave antennas; components

Production Instrument Co., 710 W. Jackson Blvd., Chicago 6, Ill.
Electric & mechanical counting, timing & recording devices & actuating switches

Progress Electronics Co., 296 Broadway, New York 7, N. Y.

Progressive Service Co., 2745 Locust St., St. Louis, Mo.
Screw machine products

Proportioneers, Inc., 345 Harris Ave., Providence 1, R. I.
Automatic controlling and proportioning equipment

Propulsion Development Labs., 1120 El Segundo Blvd., El Segundo, Calif.
Gas-flow pressure and temperature pick-up probes and rakes; development and calibration of new types
(See advertisement on page 105)

Pulse Engineering, Inc., 2657 Spring St., Redwood City, Calif.
Pulse transformers; broad band transformers; wave filters

Pyle-National Co., 1334 N. Kostner Ave., Chicago 51, Ill.
Connectors; turbo generators

Pyramid Electric Co., 1445 Hudson Blvd., North Bergen, N. J.

Pyramid Instrument Corp., 630 Merrick Rd., Lynbrook, N. Y.
Electrical instruments; pyrometers

Pyrocones, Inc., Pataskala, Ohio
Instruments for control of firing of kilns

Pyroferric Co., Inc., 621 E. 216 St., Bronx 67, N. Y.
Powdered iron cores; mechanical assemblies

Pyrofilm Resistor Co., 8 Whippany St., Morristown, N. J.
Carbon-film resistors, glass sealed, high stability; high precision networks; coaxial attenuator elements

Pyrometer Instrument Co., Inc., Bergenfield 4, N. J.
Precision pyrometers for every plant and laboratory temperature measuring problem
(See advertisement on page 177)

Pyrometer Service Co., 228 River Rd., Arlington, N. J.
Pyrometer tubes; thermocouples

Q

QOS Corp., 39 W. 60th St., New York 23, N. Y.
Infra-red night-viewing apparatus

QVS, Inc., 20 N. 15th St., East Orange, N. J.
Panel meters

Quaid Fabricators Inc., Spring Garden and Fillmore, Palmyra, N. J.
Panels; autoclaves

Quaker City Gear Works, Inc., Red Lion & Philmont Rds., Bethayres, Penna.

Quality Electric Co., 2212 S. Hill St., Los Angeles 7, Calif.

Air/fuel ratio exhaust gas analyzers

Quartz Products Corp., 688 Somerset St., Watchung, N. J.

R

RCA Division, Radio Corporation of America, Camden, N. J., Electron Tube Div., 415 Fifth St., Harrison, N. J.
Radio and electronic equipment for all purposes including laboratory and industrial apparatus

R.C.L. Mfg. Co., New Jersey Ave., Riverside, N. J.
Resistors and rheostats

RHO Engineering Co., 2242 Sepulveda Blvd., Los Angeles 64, Calif.
Potted circuits; potting compounds; resistors; encapsulated, precision, wirewound, subminiature

RKL Valve & Mfg. Co., Route 38 and Rudderow Ave., Maple Shade, N. J.
Manual, air, electrically and hydraulically operated pinch type valves for all types of material handling and flow regulation

R & M Mfg. Co., Royal Oak, Mich.
Machine shop gages

R-P & C Valve Div., American Chain & Cable Co., Inc., Reading, Pa.

RS Electronics Corp., P. O. Box 368, Station A, Palo Alto, Calif.
Radar sub-assemblies; laboratory test equipment; radar scanners

R-S Products Corp., 4523 Germantown Ave., Philadelphia 44, Pa.
Butterfly valves

Racine & Co., Inc., Jules, 20 West 47th St., New York 36, N. Y.
Stop watches; chronographs; laboratory and sporting goods; pocket and wrist chronographs
(See advertisement on page 226)

Radex Corp., 2076 Elston Ave., Chicago 14, Ill.
Electrostatic precipitators; odor absorbers; test equipment

Radial Metal Products, Inc., 1044 Linwood St., Brooklyn, N. Y.
Slip clutch couplings; torque limiting devices

Radiaphone Co., 600 E. Evergreen Ave., Monrovia, Calif.
Electrical and electronic instrumentation

Radiation, Inc., P. O. Drawer 37, Melbourne, Fla.
Digital data processing and telemetering equipment; converters; recorders; transmitters; amplifiers; transducers

Radiation Counter Labs., 5122 W. Grove St., Skokie, Ill.
Geiger-Mueller counters; radium detectors

Radiation Instrument Co., P. O. Box 733; Silver Spring, Md.

Radiation Instrument Development Lab., 5737 S. Halsted St., Chicago 21, Ill.
Radioactivity detecting and measuring instrumentation; laboratory apparatus; vacuum gages

Radiation Research Corporation, 140 E. 59th St., New York 22, N. Y.
312 Florida Ave., W. Palm Beach, Fla.
Nuclear batteries; special purpose capacitors

Radio City Products, Inc., Centre & Glendale Sts., Easton, Pa.
Electrical and radio testing instruments and accessories

Radio Condenser Co., Davis & Copewood Sts., Camden 3, N. J.
Variable standard capacitors; tuners; magnetic clutches

Radio Corporation of America, Foot of Cooper St. Building 15-1, Camden 2, N. J.
Laboratory and industrial test instruments including r-f signal generators, impedance bridges and electronic voltmeters

Radio Development & Research Corp., 100 Pennsylvania Ave., Patterson 3, N. J.
Transistors, Rectifiers, Diodes

Radio Frequency Laboratories, Inc., Booton 2, N. J.
Test and service equipment for electrical instrument calibration; crystal impedance meters; telemetering; telegraph and control terminals
(See advertisement on pages 133, 202, 288)

Radio Receptor Co., Inc., 240 Wythe Ave., Brooklyn 11, N. Y.
Selenium rectifiers; germanium diodes; dielectric heating equipment; communications equipment; navigational aids; microwave instrumentation and equipment

Radio Shack Corp., 167 Washington St., Boston, Mass.
Electronic equipment distributor

Radioactive Products, Inc., 6540 W. Congress St., Detroit 26, Mich.
Radiation survey instruments; electrical and testing instruments

Rahm Instruments Inc., 237 Lafayette St., New York 12, N. Y.
Potentiometer transducers for pressure, altitude, air speed and acceleration

Rainhart Co., P. O. Box 4065, Austin 51, Texas
Soil compactors; concrete and soil testing instrumentation

Ram Meter, Inc., 1100 Hilton Rd., Ferndale 20, Mich.
Instrument shunts; power regulating equipment; thermal switch testers; telemetering load cycle counters

Ramapo Instrument Co., I Dey Lane, Riverdale, N. J.
Flow transducers (stainless steel), strain gage translated for measurement of transients; pressures up to 5000 psig. bi-directional measurement available
(See advertisement on page 105)

Ramo-Wooldridge Corp., Electronic Instrumentation Div., 5730 Arbor Vitae, Los Angeles 45, Calif.
Specialized electronic test equipment

Ranco, Inc., 601 West Fifth Ave., Columbus 1, Ohio
Refrigeration controls

Ransom Laboratories, John H., 6425 Crenshaw Blvd., Los Angeles 43, Calif.
Optical instruments and parts; modulation reticles

Ransom Research, P. O. Box 382, San Pedro, Calif.
Control systems; computer input controls; computer modular units

Rapid Electric Co., 2881 Middletown Rd., New York 61, N. Y.
Power supplies; rectifiers; components

Rapid Specialties Co., 327 W. Huron St., Chicago 10, Ill.
Test clips for motors, coils, electrical units
(See advertisement on page 80)

Rapidan Mfg. Co., Inc., Gordonsville, Virginia
Sheet metal and screw machine parts

Rapidesign, Inc., Box 592, Glendale, Calif.

Rascher & Betzold, Inc., 730 N. Franklin St., Chicago 10, Ill.
Laboratory supplies

Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
Cathode-ray tubes

Rauland-Borg Corp., 3535 W. Addison St., Chicago 18, Ill.
Amplifiers; audio-frequency equipment; microphones

Rawson Electrical Instrument Co., Inc., 112 Potter St., Cambridge, Mass.
Magnetic fluxmeters; electrostatic voltmeters; sine-cosine potentiometers; low power factor watt meters

Ray-O-Vac Co., See Specialty Battery Div.

Rayedon Co., 234 Rockingham Rd., Rosemont, Pa.

Raybestos-Manhattan, Inc., Manhattan Rubber Div., 61 Willett St., Passiac, N. J.
Molded products; hose; abrasive and diamond wheels; packings; friction material

Raycon Corp., 248 Harbor Blvd., Belmont, Calif.
Counters

Raydyne Corp., 2715 So. Fourth St., Box 1147, Springfield, Ill.
Dynamic balancing machines

Raypar, Inc., 7800 W. Addison St., Chicago 34, Ill.

Raytheon Mfg. Co., 100 River St., Waltham 54, Mass.
Automatic and manually controlled rectifiers for all communication, industrial or laboratory applications; marine equipment; industrial equipment; communication equipment; electronic components

Raytheon Mfg. Co., Equipment Sales Div., 100 River St., Waltham, Mass.
Radar systems and components; aircraft and marine navigation instrument; electronic components

Raytheon Mfg. Co., Receiving and Cathode Ray Tube Opns., 55 Chapel St., Newton 58, Mass.
Electron tubes; cathode-ray tubes

Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne 4, Ind.
Copper enameled magnet wire—AWG sizes #10-#50

Recora Co., 6100 S. Archer Rd., Summit, Ill.
Floor-mat type extended area electrical switches; extended length hydraulic switches; control systems

Red Point Corp., 1907 Riverside Drive, Glendale 1, Calif.
Impregnating equipment and materials; automatic encapsulating machines; high vacuum pumps
(See advertisement on page 86)

Rectico, Inc., 963 Frelinghuysen Ave., Newark 8, N. J.
Metallic rectifier stacks

Redington Co., F. B., 3000 St. Charles Rd., Bellwood, Ill.
Cartooning and special packaging machinery

Telemeter
ANY VARIABLE
from Remote Points

Accurate, Fast Acting, Frequency Type Telemeter for Transmission over Wire Lines, Microwave, and Power Line Carrier

Accurate
HIGH-SPEED
Continuous
Telemeter
for
VOLTS
AMPS
WATTS
VARS
ETC.
•
Built-in
Self-Calibrating
Circuit
•

The Model 1025 Telemeter Transmitter converts DC mv from thermal converters, etc., to 10-30 cps which frequency modulates a built-in audio tone channel. AC 10 to 30 cps or relay outputs are also available. Receiver detects and demodulates transmitted signal, generating a DC mv for operation of recorders or indicating instruments. Up to 45 telemeters can be multiplexed.

Any communication link, including power line carrier, microwave or wire line may be used.

Over-all accuracy is 1% with a response speed of 1 second. Equipment features a built-in calibration circuit for 10% and 90% receiver check, and 10 cps and 30 cps transmitter check.

Any quantity which may be converted into a DC millivoltage or will operate a slidewire may be telemetered.

WE CAN HELP YOU
Our Applications Department is ready to assist you in your control, telemetering or communications problem. Phone DEerfield 4-3100.

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LABORATORIES, INC.
Boonton, New Jersey, U. S. A.

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NEWTON HIGHLANDS 61, MASS.

For more information circle 422 on inquiry card.

Redmond Co., Inc., Owosso, Mich.
Fractional-hp motors

Reed & Reese, Inc., 717 N. Lake Ave., Pasadena, Calif.
Stators armatures; modulators; demodulators; peak, notch and band pass filters

Reed Research, Inc., 1048 Potomic Ave., N. W., Washington 7, D. C.
Computers; oscillographs; analyzers

Reeves Hoffman Corp., 321 Cherry St., Carlisle, Pa.
Piezoelectric and quartz crystals

Reeves Instrument Corp., 215 E. 91st St., New York 28, N. Y.
Computers; allied components

Reeves Pulley Div., Reliance Electric Co., 1225 Seventh St., Columbus, Ind.
Variable-speed drives; variable-speed motor pulleys; variable spinning-frame drives; variable-speed-drive converters

Reeves Soundcraft Corp., 10 E. 52nd St., New York 22, N. Y.
Instrumentation tapes

Refinery Supply Co., 621 East Fourth St., Tulsa 3, Okla.
Gas testing instruments and specialties for oil and gas industry laboratory supplies

Reflectone Corp., Post Rd., Stamford, Conn.
Training aids; a-c, d-c power supplies; mechanical integrators

Refrigeration Systems, Inc., 646 W. Washington St., Chicago 6, Ill.
Temperature and humidity cabinets, cloud-and-pour oil testers

Regal Instrument Co., Inc., 25 Will Place Brooklyn, N. Y.

Regal Plastic Co., 2800 East 14th St., Kansas City 27, Mo.
Thermoplastic materials; fiberglass molders

Reiner Electronics Co., Centre & Glendale Sts., Easton, Pa.
Electronic testing equipment

Reisner Mfg. Co., Inc., W. H., Hagerstown, Md.

Relay Sales, P.O. Box 186, West Chicago, Ill.
Distributor of relays, timers, switches, etc.

Relay Service Co., 1310-12 N. Pulaski Rd., Chicago 51, Ill.
Relays

Reliance Electric & Engineering Co., 24701 Euclid Ave., Cleveland 17, Ohio
Motors; generators; tachometers; regulators

Reliance Gauge Column Co., 5902 Carnegie Ave., Cleveland 3, Ohio
Steam specialties

Reliance Instr. Mfg. Corp., 190 Glen Cove Ave., Glen Cove, L. I., N. Y.
Automatic control systems for furnaces, boilers, reactors, etc; valve-operating devices

Reliant Industries, 4947 Firestone Blvd., South Gate, Calif.
Dimensional gaging equipment

Remco, Inc., Zelienople, Pa.
Liquid level indicators

Remington Rand, Div. Sperry Rand Corp., 315 Fourth Ave., New York 10, N. Y.
Computers; microfilm cameras

Remler Co., 2101 Bryant St., San Francisco 10, Calif.
Airbourne public address systems; microphones; handsets, etc.; transistorized amplifiers

Renbrandt Inc., 98 Kirkland St., Cambridge 38, Mass.
Flexible couplings for servo-mechanisms, computers, electro-mechanical instruments.

Renick Co., L. C., 3820 S. 59th Court, Cicero 50, Ill.
Machine divided scales, verniers and dials; linear and circular machine dividing; precision reticles and glass scales; machine engraving

(See advertisement on page 192)

Reon Resistor Corp., 117 Stanley Ave., Yonkers, N. Y.
Wire-wound resistors; variable carbon composition controls

Republic Flow Meters Co., 2240 Diversey Parkway, Chicago 47, Ill.
Remote reading flow meters; power plant, industrial instruments for flow, level, pressure, draft, temperature and CO_2; automatic boiler controls; regulators; valves; desuperheater

(See advertisement on pages 75, 94, 107, 2 3 237, 239)

Republic Gage Co., 2228 Fenkel Ave., Detroit 38, Mich.
Dimensional gages

Republic Lens Co., 31 East 169th St., Bronx 52, N. Y.

Republic Mfg. Co., 15655 Brook Park Rd., Cleveland 11, Ohio
Relief valves; regulating valves; turn-and-bank indicators; pressure snubbers

Republic Rubber Div., Lee Rubber & Tire Corp., 1410 Albert, Youngstown 1, Ohio
Industrial rubber products including hose, belting, packing, etc.

Rese Engineering Co., 731 Arch St., Philadelphia 6, Pa.
Electrical and electronic instrumentation, digital computer components; high-speed digital memory equipment

Research Appliance Co., Route 8 & Craighead Rd., Allison Park, Penna.
Chemical feed pumps; automatic air samplers

(See advertisement on page 101)

Research Control Instrument Co., P. O. Box 615, W. Tulsa 7, Okla.

Research Controls, Box 5035, Tulsa, Okla.
Automatic and manual controllers; valves; components

Research Development Manufacture, Inc., 429 E. Collum St., Philadelphia 44, Pa.
Precision mechanical components; gears, cams, etc.

Research Engineering Inc., Plainfield, N. J.

Research Instrument Co., P. O. Box 9168, Portland 16, Oregon
Potentiometers; rheostats; resistors; inductance-capacitance bridges; capacitors

Research Specialties Co., 2005 Hopkins St., Berkeley 7, Calif.
Radiochemicals; chromatography equipment; electrophoresis apparatus; power supplies; constant temperature baths; micro-pipettes; zone melters

Resinite Dept., The Borden Co., Chem. Div., P. O. Box 1589, Santa Barbara, Calif.
Vinyl insulation sleevings; tapes; lacing cords

Resistance Products Co., 914 S. 13th St., Harrisburg, Pa.
Resistors, wire-wound, high voltage

Resistoflex Corp., 39 Plansoen St., Belleville 9, N. J.

Resistors, Inc., 5226 West 26 St., Chicago 50, Ill.
Resistors, adjustable, variable and wire wound

Retron Corp., 717 N. Lake Ave., Pasadena, Calif.
Linear motion potentiometers and multi-turn potentiometers

Revco Inc., 1900 Lyndale Ave., South, Minneapolis 5, Minn.
Automatic speed controllers; variable-speed drives

Revere Copper and Brass Inc., 230 Park Ave., New York 17, N. Y.
Copper; copper alloys; aluminum alloys

Revere Corporation of America, P. O. Box 304, Wallingford, Conn.
Thermocouples for liquids, air, metal, hot gases; thermocouple wire, harnesses and leads; Pitot tubes (shielded and unshielded) engine and flight test recording accessories; aviation fuel system components

Rex Corp., Hayward Rd., West Acton, Mass.

Rex Rheostat Co., 3 Foxhurst Rd., Baldwin L. I., N. Y.
Protected and unprotected slide-contact rheostats and adjustable, wire wound resistors

Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
Electric mixers; motor driven controls; air circulators; traffic signals; motors; thermatic flashers

Reynolds Gas Regulator Co., Andersin, Inc.
Automatic valves and regulators

Reynolds Metals Co., 2500 S. 3rd St., Louisville 1, Ky.
Aluminum tubing and products

Rheem Manufacturing Co., Electronics Div., 7777 Industry Ave., Riviera, Calif.
Amplifiers; voltage regulators; power suppliers; temperature systems for airborne applications; telemetering and data handling systems

Rhodes, Inc., M. H., 30 Bartholomew Ave., Hartford 6, Conn.
Mechanical Interval time switches; bell signal timers

Rhodes & Co., James H., 157 W. Hubbard St., Chicago 10, Ill.

Richards Co., Inc., Arklay S., 52 Winchester St., Newton Highland 61, Mass.
Thermocouples, lead wire and protection tubes

(See advertisement on page 289)

Richardson-Allen Corp., 116-15 15th Ave., College Point, L. I., N. Y.
Timers and time switches

Richardson Co., 2689 Lake St., Melrose Park, Ill.
Plastic and rubber products; battery parts

Richardson Co., Lockland, Cincinnati 15, Ohio

Richardson Camera Co., 171 West Magnolia, Burbank, Calif.
Portable projectors, data recording cameras; animation camera motors

Richardson Scale Co., Van Houten Ave., Clifton, N. J.
Automatic weighing machinery

Richmont, Inc., 922 S. Myrtle Ave., Monrovia, Calif.
Torque instruments and tools

Riehle Testing Machine Division, American Machine & Metals Inc., East Moline, Ill.
Testing machines and testing instruments for tension, compression, bending, torsion, shear, hardness, wear

Riester & Thesmacher Co., 1526 W. 25th St., Cleveland 13, Ohio
Metal Instrument Housings

Rimat Gage Co., 21 W. Dayton St., Pasadena 2, Calif.
Dial bore gages, micrometers; bar gages

Ripley Co., Inc., Factory St., Middletown, Conn.

Ritchie & Co., W. C., 8807 Baltimore Ave., Chicago 17, Ill.
Paper boxes, cartons, fibre cans & tubes; transparent packages

Ritchie & Son, E. S., 112 Cypress St., Brookline 46, Mass.
Marine instruments

Riverbank Laboratories, P. O. Box 65, Geneva, Ill.
Temperature-compensated, tuning-fork controlled frequency standards

Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Michigan
Switches

Rivett Lathe & Grinder, Inc., 18 Riverview Rd., Brighton 35, Mass.
Lathes, grinders; air & hydraulic cylinders and valves; hydraulic power units

Robbins Aviation 1735 W. Florence Ave., Los Angeles 47, Calif
Dehumidifiers: hi-lo flows, hi-lo pressures; valves: leakproof, metering, instrument, shutoff, hi-vacuum to 6000 psig

(See advertisement on pages 145, 239)

Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio
Frequency converters; fractional-hp motors

Robertshaw-Fulton Controls Co., 110 E. Otterman St., Greensburg, Pa.
Temperature controllers and regulators

Robertson & Co., John H., 4153 W. Belmont Ave., Chicago 41, Ill.
Scientific glassware, laboratory apparatus

Robertson & Ruth, Box 534, Elmhurst, Illinois
Dial hole-cutting saw

Robins Industries Corp., 214-26 41st Ave., Bayside 61, N. Y.
Magnetic recording tap cutter-splicers

Robinson Aviation Inc., Teterboro Airport, Teterboro, N. J.
Anti-vibration mountings

Robinson Orifice Fitting Co., 2830 Lugo St., Los Angeles 23, Calif.
Orifice fittings,flanges unions, and related equipment

(See advertisement on page 151)

Robinson Orifice Fitting Co. of Texas, Inc., P. O. Box 17216, Houston 31, Texas
Orifice fittings, flanges; unions; and related equipment

Robotron Corp., 21300 W. 8 Mile Rd., Detroit 19, Mich.

Rochester Electronics Co., Inc., P. O. Box 227, Penfield, N. Y.
Decade resistors

Rochester Mfg., Inc., 100 Rockwood St., Rochester 10, N. Y.
Pressure and liquid level indicators and thermometers

Rockford Machine Tool Co., 2500 Kishwaukee St., Rockford, Ill.
Rockwell Co., W. S., 200 Eliot St., Fairfield, Conn.
Butterfly control valves; industrial furnaces and ovens

Rockwell Engineering Co., 2121 E. 45th St., Indianapolis 5, Ind.
Special instruments to customers specifications

Rockwell Mfg. Co., 400 N. Lexington Ave., Pittsburgh 8, Pa.
Fluid meters; hydraulic pumps; gas distribution systems

Rockwell Mfg. Co. Instrument Div. Box 2396 Tulsa, Okla.
Timing instrumentation

Rockwell Mfg. Co. Hopewell Div., Hopewell, N. J.
Service cocks, meter and air cocks; liquid meters

Rockwood Sprinkler Co., 38 Harlow St., Worcester 5, Mass.
Air-operated valves; pipe detectors

Rodale Mfg. Co., Inc., Emmaus, Pa.
Electrical wiring devices

Roebling's Sons Co., John A., 640 S. Broad St., Trenton 2, N. J.

Rodon, Inc., Easton Rd., Neshaminy, Pa.
Cable reels

Roemer Drug Co., 606 N. Broadway, Milwaukee 2, Wis.
Laboratory supply house

Rogan Brothers, 8025 North Monticello Ave., Skokie, Ill.
Knobs molded from stock molds for all types of instruments; parts molded to manufacturers' specifications

(See advertisement on page 123)

Rogers & Clarke Mfg. Co., 901 River Lane, P. O. Box 93, Loves Park Postal Station, Rockford, Ill.
Optical components for photographic and instrument industries; lens curve-generating equipment

Roller-Smith Corp., 1825 W. Market St., Bethlehem, Pa.
Instruments (indicating and graphic) air and oil circuit breakers, relays, switchboards, precision balances, transformers, instrument and control switches

Rome Cable Co., Rome, N. Y.
Wires; conduits; power and control cables

Ronar, Inc., 1316 Sherman Ave., Evanston, Ill.
Electronic stethoscope; polariscopes; electrical and electronic components

Roots-Connersville Blower Co., 900 West Mount Co., Connersville, Ind.
Positive-displacement fluid meters; pumps; blowers; gas generators

Ross Operating Valve Co., 120 E. Golden Gate Ave., Detroit 3, Mich.
Valves

Rotating Components Inc., 267 Green St., Brooklyn 28, N. Y.
Sub-fractional-hp motors; fans; blowers; servo motors; geared motors; alternators

Rotron Controls Corp., 7-9 Schoomaker Lane, Woodstock, N. Y.
Fractional-hp motors

Roy Co., Milton, 1300 E. Mermaid Lane, Philadelphia 18, Pa.
Positive displacement controlled volume pumps; chemical feed systems

Royal Precision Corp., Port Chester Ave., Portchester, N. Y.
Binary, stored program digital computers

Royson Engr. Co., Jacksonville Rd. & Montgomery Ave. Hatboro, Penna.
Chart identification printers; special recorders; electro-mechanical devices

Rubatex Division, Great American Industries, Inc., Bedford, Virginia
Cellular rubber products

Rubicon Co., Ridge Ave. at 35th St., Philadelphia 32, Pa.
Precision electrical instruments: potentiometers, galvometers, bridges; resistance standards; photoelectric colorimeters; transmission dynamometers

Rudolph & Sons, O. C., P. O. Box 446, Caldwell, N. J.
Optical instruments, control instruments

Rueckert Manufacturing Co., 83 King St., East Greenwich, R. I.
Wood and imitation covered cases for tools, instruments and optical goods

Ruge Associates, Inc., Arthur C., 733 Concord Ave., Cambridge 38, Mass.
Resistance thermometer elements

Rupp & Bowman Co., 315 Superior St., Toledo 3, Ohio
Laboratory supplies

Ruska Instrument Corp., 4607 Montrose Blvd., Houston 6, Texas
Geophysical instruments; high pressure viscometers; gas compressibility apparatus

Rust Industrial Company, 130 Silver St., Manchester, N. H.

Rutherford Electronics Co., 8944 Lindblade St., Culver City, Calif.
Precision timers; pulse generators

Ruttco Mfg. Co., 105-20 Metropolitan Ave., Forest Hills, N. Y.
Hydrometers; thermometers

Ryan Recording Thermometer Co., 851 Poplar Pl., Seattle 44, Wash.
Portable recording thermometers for perishables in transit or storage

Ryan Tool & Engineering Co., 19159 John R. St., Detroit 3, Mich.
Height gages; fixtures; special machinery

S

Sackman Co., W. H., Inc., P. O. Box 546 Pottstown, Penna.
Stainless steel, brass, copper, shafts

Sage Electronics Corp., 302 N. Goodman St., Rochester 7, N. Y.
Miniature wire-wound, power resistors

Samarius Electronics, 123 Canal St., Shelton, Conn.
Potentiometer windings to specification, linear and functional

Sampson Chemical & Pigment Corp., 2830 W. Lake St., Chicago 12, Ill.
Phosphorescent and fluorescent coatings

San Fernando Electric Mfg. Co., 1509 First St., San Fernando, Calif.
Hermetically sealed capacitors; rf filters; precision wire wound single and multi-turn potentiometers

Sanborn Co., 175 Wyman St., Waltham, Mass.
Electronic instruments

(See advertisement on page 19)

Sanders Associates, Inc., 95 Canal St., Nashua, N. H.
Components and systems in electronics, hydraulics and electro-mechanics, radar and missile systems

Sandsteel Spring Div., Sandvik Steel Inc., 1702 Nevins Rd., Fair Lawn, New Jersey
Special springs

(See advertisement on page 199)

Sandy Mfg. Co., 26 Maple Ave., Sellersville, Pa.

Sangamo Electric Company, 1022 Converge Ave., Springfield, Ill. Capacitor Div., Marion, Ill. Electronic Components Div., 2110 Clear Lake Rd., Springfield, Ill.

Electric meters; instrument transformers; time switches and radio-condensers

Santay Corp., 351 No. Crawford Ave., Chicago 24, Ill.

Sarco Company, Inc., 350 Fifth Ave., New York 1, N. Y.
Temperature and pressure regulators; steam traps; strainers

Sargent & Co., 4647 Foster Ave., Chicago 30, Ill.
Laboratory supplies and chemicals

Sarkes Tarzian, Inc., Rectifier Div., 415 N. College Ave., Bloomington, Ind.

Sauereisen Cement Co., 1045 N. Canal St., Pittsburgh 15, Pa.
Coatings and cements

Sawyer Bailey Corp., 1559 Niagara St., Buffalo 13, N. Y.
Air compressors

Saxl Instrument Co., Harvard, Mass.
Tension and torque measuring instruments

Saxonburg Ceramics, P. O. Box 100, Saxonburg, Pa.

Insulation testers; insulating materials; industrial ceramics

Scaico Controls, Inc., C. C. Pump Mfg. Div., P. O. Box 41, Cooper St., Delanco, Palmyra, N. J.

SCAM Instrument Corp., 1811 W. Irving Park Rd. Chicago 13, Ill.
Annunciator and alarm systems

Scharr & Co., 7300 W. Montrose, Chicago 34, Ill.
Laboratory supplies

Schade Valve Mfg. Co., 2527 N. Bodine St., Philadelphia 33, Pa.
Automatic regulating valves

Schaefer Bros., Co., 1059 W. 11th St., Chicago 7, Ill.
Rheostats

Schaevitz Engineering, Crescent Blvd. at Drexel Ave., Camden, N. J.
Accelerometers, extensometers, position indicators, remote metering equipment; differential transformers

Schaffer Poidometer Co., 2828 Smallman St., Pittsburgh 22, Pa.
Scales

Schauer Mfg. Corp., 4500 Alpine Rd., Rossmoyne, Cincinnati 36, Ohio
Battery chargers; battery eliminators; rectifiers

Scheidl Mfg. Co., 1985 Great Neck Rd., Copiague L. I., N. Y.

Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.
Optical measuring and inspection equipment

Scherr Optical Tools, Inc., 200 Lafayette St., N. Y. 12, N. Y.
Shop instruments and components

Schlumberger Well Surveying Corp., Box 550, Ridgefield, Conn.
Nuclear magnetic resonance analyzers

Schneider-Cogswell, Inc., 1849 N. Halstead St., Chicago 14, Ill.
Precision lenses and prisms

Schnitzer Alloy Products Co., 537 Pine St., Elizabeth 1, N. J.

Schrader's Son, A., 470 Vanderbilt Ave., Brooklyn 38, N. Y.
Pneumatic cylinders; safety valves; regulating valves; solenoid valves

Schueler & Co., 75 Cliff St., New York 38, N. Y.

Schutte & Koerting Co., Cornwells Heights, Bucks County, Pa.
Heat transfer equipment; vacuum pumps; rotameters and flow indicators; tubes; valves; spray nozzles; atomizers; gear pumps; desuperheaters

(See advertisement on page 107)

Schutte Optical Co., Inc., 16 Dowling Place, Rochester 5, N. Y.
Optical instruments and components

Schuttig & Co., 5005 Calvert Rd., College Park, Md.
Radio and wired remote-control equipment

Schweitzer Mfg. Co., Inc., E. O., 1002 Dundee Rd., Northbrook, Ill.
Electrical instruments

Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.

Scientific Apparatus Co., 4 Landscape Ave., Yonkers 5, N. Y.
Laboratory apparatus

Scientific Balance and Instrument Service, 2650 S. W. Temple, Salt Lake City 15, Utah
High precision laboratory analytical balances

Scientific Equipment Co., 3527 Lancaster Ave., Philadelphia 4, Pa.
Laboratory apparatus

Scientific Glass Apparatus Co., Inc., 100 Lakewood Terrace, Bloomfield, N. J.
Glass apparatus and interchangeable ground glass joints; spectrophotometers; pH meters; ovens

Scientific Instrument Co., 1041 Second St., Detroit 26, Mich.
Industrial & laboratory thermometers; hydrometers; special laboratory apparatus

Scientific Instrument Development Labs., 204 W. Court St. Paris, Illinois
Industrial and scientific instruments

Scientific Wood Cabinet Co., 80-86 Holmes St., Belleville 9, N. J.
Wooden cases, cabinets, and chests

Scope Instrument Corp., Scope Building, Mamaroneck, N. Y.

Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Electronic equipment for measurement, analysis and reproduction of sound, noise and vibration, including

meters; analyzers, amplifiers, radio tuners and turntables

Scott Testers, Inc., 166 Blackstone St., Box 963, Providence, R. I.
Testing machines
(See advertisement on pages 155, 159, 190, 217, 218, 252)

Scovill Mfg. Co., P. O. Box 1820, Waterbury 20, Conn.
Tube fittings

Scrayco Manufacturing Co., 201 Green Ave., Middlesex, N. J.
Level controls for bin and bulk materials

Scruggs Co., Loyd, P. O. Drawer 232, Festus, Missouri
Shaded pole, universal, precision, geared and capacitor-type motors

Scully-Jones and Co., 1901 S. Rockwell St., Chicago 8, Ill.
Indicating flow meters; pressure gages; thermometers

Seaboard Electric Prods. Corp., 417 Canal St., New York, N. Y.
Aircraft flashers; audible warning signals; timing mechanisms

Sealectric Switch & Relay Corp., 6025 N. Keystone Ave., Chicago 30, Ill.
Snap acting switches; relays

Seals, Ltd., 1010 Mission St., South Pasadena, Calif.
Glass insulated electrical connectors

Sealtron Corp., Reading Rd., at Amity, Box 72, Cincinnati 15, Ohio
Glass-to-metal hermetic seals

Seamlex Co., Inc., 41-33 24th St., Long Island City 1, N. Y.

Sebrell Corp., J. B., 300 S. Los Angeles St., Los Angeles 13, Calif.

Seco Mfg. Co., 5015 Penn Ave., South, Minneapolis 19, Minn.
Electronic test equipment

Secon Metals Corp., 7 Intervale St., White Plains, N. Y.
Wire, alloys

Security Controls, Inc., 257 Franklin St., Buffalo 2, N. Y.
Machine safety and control equipment

Security Valve Corp., 541 W. Garfield Ave., Glendale 4, Calif.
Valves for high, low or differential pressure, electric or automatic shut-off; for chemical, oil or gas per API and ASME specs
(See advertisement on page 237)

Seedburo Equipment Co., 618 W. Jackson Blvd., Chicago 6, Ill.
Moisture-testers; ovens; scales; thermometers

Seederer-Kohlbusch, Inc., 25 S. Van Brunt St., Englewood, N. J.
Analytical balances and weights; spring dynamometers

Seegers Manufacturing Co., 2600 Fletcher St., Chicago 18, Ill.
Gauge components including gauge movements, hairsprings, Bourdon tubes, links, etc.

Seely Instrument Co., 377 Fourth St., Niagara Falls, N. Y.
Interval timers; temperature and pressure pilots

Seismograph Service Corp., P. O. Box 1590-D, Tulsa 1, Okla.
Geophysical instruments

Selas Corp. of America, Dresher, Pa.
Furnaces; ovens; brazing machinery; micro-filtration equipment; separators; flow rate indicators

Sell Electric Co., H. H., 3240 Dakota Ave., Minneapolis 16, Minn.
Phase sequence indicators

Sel-Rex Corp., 155 Manchester Place, Newark 4, N. J.
Precious metals processes; metallic power rectifiers; airborne power equipment; liquid clarification filters

Semimetals, Inc., 15 E. 48th St., New York 17, N. Y.
Silicon crystal growing and refining equipment; single-crystal germanium, N-type or P-type for diode and transistor applications

Semon Bache & Co.,
(See Bache)

Sendur Mfg. Co., 3225 N. Sheffield St., Chicago 13, Ill.
Electrical instruments

Sensitive Research Instrument Corp., 310 Main St., New Rochelle, N. Y.
Electrical instruments measuring quantities or values of small current or voltage

Sequoia Process Corp., 871 Williow St., P. O. Box 1007, Redwood City, Calif.
Electrical and electronic components

Sequoia Wire, 2201 Bay Rd., Redwood City, Calif.
Electronic hook-up wire and cables; shielded constructions, specialty cables; standard insulations, and Teflon and Hyrad irradiated insulation

Seraphin Test Measure Co., 1314 North 7th St., Philadelphia 22, Pa.

Serdex, Inc., 91 Cambridge St., Boston 14, Mass.
Humidity indicators, recorders and controllers

Service Recorder Co., 1375 Euclid Ave., Cleveland 15, Ohio
Vehicle recorders; fuel consumption meters

Servo Corp. of America, 2020 Jericho Pike, New Hyde Park, L. I., N. Y.
Electronic equipment for automation; servomechanisms; analog and digital computers; infrared detection systems

Servomechanisms Inc., Mechatrol Div., 625 Main St., Westbury, L. I., N. Y.
Computers; amplifiers; servomotors

Servomechanisms, Inc., 12500 Aviation Blvd., Hawthorne, Calif.
Electronic and electromechanical sub-systems and components

Servonic Instruments, Inc., Costa Mesa, Calif.
Wire-wound potentiometer-type transducers (translation potentiometers, pressure pickups, slip rings, specially designed switches for guided missiles)
(See advertisement on page 173)

Servo Recording Instruments, Inc., 917 Grand Ave., Phoenix, Arizona
Personnel-safety dosimeters, self-reading

Servonics, Inc., 834 N. Henry St., Alexandria, Va.
Potentiometers; electromechanical integrators; magnetic amplifiers

Servospeed Div., Electro Devices, Inc., 4 Godwin Ave., Paterson 1, N. J.
Electronic motor speed control systems for variable speed by manual selection or by automatic control as process or variable function
(See advertisement on page 145)

Servo-Systems Co., 55 Meeker Ave., Newark, N. J.
(See advertisement on page 194)

Servo-Tek Products Co., Inc., 1086 Goffee Rd., Hawthorne, N. J.
Motors; tachometer generators; adjustable-speed drives; motor-generator sets; constant-reference voltage supplies

Servotrol Co., Framingham Centre, Mass.
Voltage-dividing resistors

Sessions Clock Co., Box C, Forestville, Conn.
Timepieces and automatic timers

Seth Thomas Clocks, Div., General Time Corp., 135 S. Main St., Thomaston, Conn.
Household clocks; outdoor and tower clocks; clock movements for industrial purposes; electric timers

Severance Tool Industries, Inc., 754 Iowa Rd., Saginaw, Mich.

Shakeproof Div., Illinois Tool Works, St. Charles Rd., Elgin, Ill.
Specialized fasteners

Shallcross Controls, Inc., Markesan, Wis.
Electric combustion, draft, and process control equipment

Shallcross Manufacturing Co., 10 Jackson Ave., Collingdale, Penna.
Wirewound and power resistors; switches; delay lines; attenuators; communications test sets; high voltage measuring equipment

Shand & Jurs Co., 8th & Carlton St., Berkeley 10, Calif.
Remote-reading equipment for process variables; remote control for motors, valves, data processing apparatus; storage tank fittings

Shawmut Engrg. Co., 195 Freeport St., Boston 22, Mass.
Abrasion testers

Sheffield Corp., 721 Springfield St., Dayton 1, Ohio
Pneumatic, electric, electronic, and mechanical gages and measuring instruments; machine tools

Sheip Mfg. Co., Henry H., 6th & Columbia Ave., Philadelphia 22, Pa.

Shelby Instrument Co., 1701 Magnolia St., Long Beach 13, Calif.
Electrical instruments

Sheldon & Co., E. H., Muskegon 82, Mich.
Laboratory furniture

Sheldon Machine Co., Inc., 4258 N. Knox Ave., Chicago 41, Ill.
Metalworking lathes; milling machines; shapers; geared-head lathes

Shepard Labs., Broad St. & Park Ave., Summit, N. J.
Automatic exposure controllers; relays; ordnance instruments

Sherron Metallic Corp., 1201 Flushing Ave., Brooklyn 6, N. Y.
Electrical testing equipment

Sherwin-Williams Co., 101 Prospect Ave., N. W., Cleveland 1, Ohio

Shielding, Inc., Riverside Park, N. J.
Radio noise filters

Shore Instrument & Mfg. Co., 90-35 Van Wyck Expressway, Jamaica 35, N. Y.
Scleroscope hardness testers
(See advertisement on page 118)

Shunk Mfg. Co., Bucyrus, Ohio

Shure Brothers, Inc., 222 Hartrey Ave., Evanston, Ill.
Microphones

Shurite Meters, 61 Hamilton St., New Haven 8, Conn.
Electrical panel and portable instruments
(See advertisement on page 153)

Sibley Co., Haddam, Conn.
Printed circuits; commutation discs; silver, gold, nickel, rhodium, palladium, tin plating; technical precision plating; plating on non-conductors for rotors, slip-rings, etc.
(See advertisement on page 72)

Sickles & Sons, Inc., 904 Chestnut St., Philadelphia 7, Pa.

Sickles Div., F. W., General Instrument Corp., P. O. Box 330, Chicopee, Mass.
Coils and tuning mechanisms for radio, television and military applications

Siemens-New York, Inc., 350 Fifth Ave., New York 1, N. Y.

Siemon Engineering Co., Box 108, Wayne, Ill.

Sierra Electronic Corp., 3885 Bohannon Dr., Menlo Park, Calif.
RF Wattmeters; coaxial terminations; wave analyzers; line-fault analyzers; carrier-frequency voltmeters; special equipment

Sierra Engineering Co., 123 E. Montecito Ave., Sierra Madre, Calif.
Miniature mechanical chain and sprockets

Sightmaster Corp., 111 Cedar St., New Rochelle, N. Y.
Microwave calorimeters; relays; welding rods

Sigma Instruments Inc., 170 Pearl St., South Braintree, Mass.
Relays

Sigmamator, Inc., 600 North Main St., Middleport, N. Y.
Pumps

Signal Electric Mfg. Co., Menominee, Mich.
Fractional-hp motors

Signal Indicator Corp., 60 Stewart Ave., Brooklyn, N. Y.
Dial lights; edge lighting assemblies

Signal Transformer Co., 2518 Coney Island Ave., Brooklyn 23, N. Y.
Transformers

Sig-Trans., Inc., Haverhill Rd., Amesbury, Mass.

Silge & Kuhne, 16th & Carolina Sts., San Francisco 19, Calif.

Sillcocks-Miller Co., 10 W. Parker Ave., Maplewood, N. J.

Simmonds Aerocessories, Inc., 105 White Plains Rd., Tarrytown, N. Y.
Electronic fuel gages; liquid level sensing devices; test equipment; fuel injection systems; remote controls; cowling latches

Simonds Saw and Steel Co., Ohio St., Lockport, N. Y.
Permanent magnet materials; soft magnetic materials; high and low expansion alloys

Simplex Time Recorder Co., Sanborn St., P. O. Box 280, Gardner, Mass.
Time recorders; printing counters; time stamps; elapsed time indicators; productographs; master clocks; program systems

Simplex Valve & Meter Co., 7 E. Orange St., Lancaster, Penna.

Simpson Electric Div., Amer. Gage & Machine Co., 5200 W. Kinzie St., Chicago 4[illegible], Ill.
Electronic test equipment; panel meters; test equipment for radio, TV, air conditioning, and refrigeration; meter relays; aviation instruments

Simpson Optical Mfg. Co., 3200 W. Carroll Ave., Chicago 24, Ill.
Lenses; prisms; optical flats and complete optical systems
(See advertisement on page 148)

Sinclair Collins Valve Co., 454 Morgan Ave., Akron 11, Ohio
Automatic controllers and control valves

Single Crystal Corp. of America, RD 1, Saxonburg Blvd., Saxonburg, Penna.
Single crystals; ultra-pure chemicals; scintillation materials

Sipp-Eastwood Corp., 39 Keen St., Paterson, N. J.
Electrical and electronic instruments; transformers

Sittler Corp., 16 North Ada St., Chicago 7, Ill.
Bare, braided, and stranded copper bonding jumpers and cable assemblies; voltage and continuity testers

Size Control Company, Div. of American Gage & Machine Co., 2500 Washington Blvd., Chicago 12, Ill.
Precision inspection equipment; centerless lapping machines

Sjostrom Co., John E., 1711 N. Tenth St., Philadelphia 22, Pa.
Laboratory furniture

Skinner Electric Valve Div., Skinner Chuck Co., New Britain, Conn.
Solenoid valves

Skyway Precision Tool Co., 3217 Casitas Ave., Los Angeles 26, Calif.
Torque testers

Slater Electric & Mfg. Co., Inc., 37th Ave. & 56th St., Woodside 77, N. Y.
Valves; pressure snubbers; switches, wiring devices

Slaughter Co., Young & Ridge Sts., Piqua 2, Ohio
High voltage and electrical leakage testing equipment
(See advertisement on page 216)

Slip Ring Co. of America, 3619 West Jefferson, Los Angeles, Calif.
Aircraft Instruments; intervalometers; precious metal contacts telemetering systems, rf, radio remote control
(See advertisement on page 196)

Slocomb Co., J. T., 65 Matson Hill Rd., South Glastonbury, Conn.
Micrometer calipers

Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.
Universal fractional-hp motors, dynamotors, shaded pole motors and generators

Smith Corp. A. O., 5715 Smithway, Los Angeles 22, Calif.

Smith Co., Arthur F., 311 Alexander St., Rochester 3, N. Y.

Smith Co., S. Morgan, York, Pa.
Electromechanical components

Smith Corp., A. O., 5743 Smithway, Los Angeles 22, Calif.
Gasoline and oil meters

Smith Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
Phone tip plugs; banana plugs; receptacles

Smith Metal Treatment Co., R. G., 245 South St., Newark 5, N. J.

Smith Products Corp., Graydon, 52 Commonwealth Ave., West Concord, Mass.

Smok-Trol Corp., Ossining, N. Y.

Snap-Tite, Inc., 201 Titusville Rd., Union City, Pa.
Quick connect-disconnect couplings for hydraulic and pneumatic fluid transfer lines

Sodemann Heat & Power Co., 1737 Macklind Ave., St. Louis 10, Mo.
Air conditioned moist cabinet

Soiltest, Inc., 4711 W. North Ave., Chicago 39, Ill.
Engineering test apparatus for soils, concrete and asphalt

Sola Electric Co., 4633 W. 16th St., Chicago 50, Ill.
Transformers; automatic voltage adjusters

Sonex, Inc., 73 South State Rd., Upper Darby, Penna.

Sonoflux Corp., 4200 Perry, Houston, Texas
Non-destructive inspection and testing equipment

Soreng Products Corp., see Controls Co. of America

Sorensen & Co., Inc., 375 Fairchild Ave., Stamford, Conn.
Chokes; current regulators; voltage regulators; transformers

Sorvall, Ivan, P. O. Box 230, Pearl St., Norwalk, Conn.
Laboratory instruments

Sound Apparatus Co., Stirling, N. J.
Sound measuring equipment; graphic recorders

South Bend Lathe Works, 303 E. Madison St., South Bend 22, Ind.
Precision lathes; spindle milling machines; bench shapers; drill presses; pedestal tool grinders

Southern Desk Co., Hickory, N. C.
Laboratory furniture

Southern Electronics Corp., 150 West Cypress Ave., Burbank, Calif.
Precision capacitors including plastic film types
(See advertisement on page 3)

Southwestern Industrial Electronics Co., 2831 Post Oak Road, Houston 19, Texas
Geophysical instruments; industrial controls; electronic test instruments; flowmeters; computers; transformers; tape recorders

Sparling Meter Co., 225 N. Temple City Bldg., El Monte, Calif.
Main-line and irrigation water meters; recording instruments, and control equipment

Spartan Coach & Mfg. Co., 222 W. Huron St., Chicago 10, Ill.
Edge-lighted panels

Sparton Control Systems Div., Sparks-Withington Co., Jackson, Michigan
Control and supervisory telemetering devices and design

Spaulding Fibre Co., 310 Wheeler St., Tonawanda, N. Y.
Fibre and plastic rods, tubes and fabricated parts

Special Instruments Lab. Inc., 312 W. Vine Ave., Knoxville, Tenn.
Radioactivity and geophysical instruments

Special Screw Products Co., 100 Northfield Rd., Bedford, Ohio
High pressure, corrosion-resistant, flared tube fittings

Specialized Instruments Corp., 601 O'Neil Ave., Belmont, Calif.
Ultra-speed centrifuges

Specialties Inc., Skunks Misery Rd., Syosset, L. I., N. Y.
Computers; airborne instruments and cameras; air dehydrators

Specialty Battery Co., Div. of Ray-O-Vac, 212 East Washington Ave., Madison 3, Wis.
Dry batteries

Specialty Engineering and Mfg. Co., 108 E. Dedham St., Boston, Mass.
Bourdon tubes and associated assemblies

Specialty Insul. Mfg. Co., Inc., 55 Center Ave., Hoosick Falls, N. Y.

Specialty Screw Machine Products Co., Dillerville Rd., Lancaster, Pa.

Spectrol Electronics Div., Carrier Corp., 1704 S. Del Mar St., San Gabriel, Calif.
Electrical and electronic components

Spectrum Instruments Inc., 44-05 30th Ave., Long Island City 3, N. Y.
(See advertisement on page 12)

Speedometer Electric Co., 690 Van Ness Ave., San Francisco 2, Calif.
Survey footmeter

Speedway Manufacturing Co., 1834 S. 52nd Ave., Cicero 50, Ill.
Speer Carbon Co., St. Marys, Pa.
Resistors and coil forms

Speidel & Co., Inc., Chas. W., 614 Baltimore Ave., Fernwood, Pa.
Surveying instruments

Spellman Television Co., Inc., 3029 Webster Ave., Bronx 67, N. Y.
High-voltage specialties; power supplies
(See advertisement on page 212)

Spence Engineering Co., Inc., 53 Grant St., Walden, N. Y.
Regulating valves; desuperheaters; strainers

Spencer-Kennedy Labs., Inc., 1320 Soldiers Field Rd., Boston 35, Mass.
Electronic laboratory test equipment: wide band and chain pulse amplifiers; fast-rise pulse generators; square wave generators; variable electronic filters

Spencer Mfg. Co., S. M., 3 Cornhill St., Boston 8, Mass.

Spencer Thermostat Div., Metals & Controls Corp., Attleboro, Mass.
Overheat motor protectors; starting relays; circuit breakers; precision snap switches

Sperry Gyroscope Co., Inc., Great Neck, N. Y.
Aircraft and marine navigational instruments

Sperry Products, Inc., Shelter Rock Road, Danbury, Conn.
Special railway testers

Sperry-Sun Well Surveying Co., 3118 Blodgett Ave., P. O. Box 8008, Houston 4, Texas
Underground surveying instruments for oil wells

Sphinx American Co., 32-30 58th St., Woodside 2, L. I., N. Y.

Spicer Co., Walter, 2088 E. Villa St., Pasadena, Calif.
Precision resistors, wire-wound to specification

Spinco Div., Beckman Instruments, Inc., Stanford Industrial Park, Palo Alto, Calif.
Instruments used in medical, scientific, and commercial research; and in clinical medicine

Spitfire Tool Co., 2931 N. Pulaski Rd., Chicago 41, Ill.
(See advertisement on page 127)

Spivey, Inc., James S., 4908 Hampden Lane, Washington 14, D. C.
Electronic equipment

Sprague Electric Co., Marshall St., North Adams, Mass.
Electrical instruments; resistors; capacitors; and circuit components

Sprague Engineering Corp., Budlong Ave. at 135 St., Gardena, Calif.
Automatic shut-off valves; hydraulic, pneumatic and fuel system test equipment, high-pressure air-operated pumps, gages savers; high pressure specialties
(See advertisement on page 238)

Sprague Meter Co., 35 South Ave., Bridgeport 4, Conn.
Liquid meters

Sprengnether Instrument Co., Inc., W. F., 4567 Swan Ave., St. Louis 10, Mo.
Scientific instruments; magnetometers; seismographs
(See advertisement on page 193)

Spring Specialty Co., 23 N. 5th Ave., Maywood, Ill
Scribers; magnets; springs

Square D Company, 4041 N. Richards St., Milwaukee 12, Wis.
Switches; relays; pressure and vacuum controllers; control valves; motor starters

Square D Co., see also Kollsman Instr. Div.

Squires Co., C. E., E. 18502 Syracuse Ave., Cleveland 10, Ohio
Boiler room instrumentation

Stackpole Carbon Co., St. Marys, Pa.
Carbon division: Carbon brushes; precious metal contacts; carbon metal modled products
Electronic division: Fixed and variable composition resistors; powdered iron cores; molded ferrite cores; permanent magnet materials; slide switches; composition capacitors; iron coil forms

Standard Arcturus Corp., 54 Clark St., Newark, N. J.
Vacuum tubes

Standard Automation Products, Division of General Industries of Amer., 1738 Ridgeway Rd., Havertown, Pa.
Screw machine products; precision gears; instrument parts; powdered metal machine parts

Standard Cabinet Co., 56 Washington St., Carlstadt, N. J.
Test chambers: altitude, temperature, humidity
(See advertisement on page 100)

Standard Controls, Inc., 1130 Popular St., Seattle 44, Wash.
Transducers; pressure control servovalves

Standard Dayton Corp., P. O. Box 1001, Dayton 1, Ohio
Fractional-hp motors

Standard Electric Time Co., 89 Logan St., Springfield 2, Mass.
Electric and electronic components, assemblies and systems for time control, communications, experimental power distribution and network analysis

Standard Electrical Products Co., 2240 E. 3rd St., Dayton 3, Ohio
Relays

Standard Electronic Research Corp., 2 East End Ave., New York 21, N. Y.
Electronic instruments; time and frequency standards

Standard Electronics Co., 1611 West 63rd St., Chicago 36, Ill.
Radio interference filters; toroidal coils & transformers; cable assemblies

Standard Engineering & Machine Co., Inc., 3709 Capitol Trail, Marshalltown, Wilmington 8, Del.
Automatic-control system; valves

Standard Gage Co., Inc., 70 Parker Ave., Poughkeepsie, N. Y.
Gages for linear measurements

Standard Horse Nail Corp., Box 316, New Brighton, Pa.
Screw machine products

Standard Molding Corp., 1517 E. 3rd St., Dayton 1, Ohio

Standard Products, Inc., 650 East Gilbert, Wichita, Kansas

Standard Pressed Steel Co., Box 204, Jenkintown, Pa.
Screw machine products; shop equipment, including desks, shelving, etc.

Standard Science Supply Co., 1231-39 N. Honore St., Chicago 22, Ill.
Laboratory supplies

Standard Scientific Supply Corp., 808 Broadway, New York N. Y.
Laboratory supplies

Standard Thermometer, Inc., 952 Dorchester Ave., Boston 25, Mass.
Mechanical thermometers

Standard Tool & Machine Co., Woodland Rd., Pittsburgh 38, Pa.
Thermocouple assemblies

Standard Transformer Corp., 3580 Elston Ave., Chicago 18, Ill.
Transformers

Stanley Works, 195 Lake St., New Britain, Conn.
Hand and electric tools; industrial and builders hardware; door controls; metal parts; coatings; steel and steel strapping

Stanut Manufacturing Co., Inc., 47-43 37th St., Long Island City 1, N. Y.
Coil winding equipment

Staplex Co., Air Sampler Div., 777 Fifth Ave., Brooklyn 22, N. Y.
High-volume air sampler for air pollution study and control

Star Compass Co., 110 Antwerp St., East Milton, Mass
Compasses

Star Stainless Screw Co., 655 Union Blvd., Paterson 2, N. J.

Star-Martin Gage Co., 12 Bridge St., Concord, N. H.

Starr Corporation, 49 W. 19th St., New York 11, N. Y.
Vacuum coating of lenses, prisms and front surface mirrors

Starrett Co., L. S., Athol, Mass.
Precision tools; dial indicators; steel tapes

State Labs Inc., 649 Broadway, New York 12, N. Y.
Electronic tubes, crystal diodes, transistors

States Co., 19 New Park Ave., Hartford 6, Conn.
Electricity meter testers

((See advertisement on page 157)

Statham Development Corp., 12411 W. Olympic Blvd., Los Angeles 64, Calif.
Temperature test chambers; regulated power supplies for strain gages; phase meters; angular accelerometer calibration equipment (torsional pendulum, torsional shake table)

(See advertisement on page 97)

Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.
Pressure tranducers; accelerometers; load cells

Statolet Corp., 65 61st St., Guttenberg, N. J.

Staver Co., Inc., 45 N. Saxton Ave., Bay Shore, L. I., N. Y.

Stavid Engineering, Inc., U. S. Highway #22, Plainfield, N. J.
Research, development, production: field of electronic-electromechanical guidance, control, radar, infrared, beacons, telemetering, automation; simulation; test equipment

Steatite Div., American Lava Corp., Cherokee Blvd. & Mfgrs. Rd., Chattanooga 5, Tenn.
Ceramic products; steatite and titania

Stebar Co., 217-28th Ave., Minneapolis 11, Minn.
Microscopes

Steel City Testing Machines, Inc., 8817 Lyndon Ave., Detroit 38, Mich.
Testing machines

Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.

Stein Laboratories, Fred, 121 N. 4th St., Atchison, Kansas
Electronic moisture detectors

Steiner-Ives Co., Springfield Rd., Union, N. J.

Stelma, Inc., 190 Henry St., Stamford, Conn.
Telegraph telephone equipment: multichannel distortion monitors, repeaters, transistorized frequency shift systems; transistorized, printed-circuit distortion analyzers

Stepper Motors Corp., 11879 W. Florence Ave., Culver City, Calif.
Bi-directional dc step motors and precision digital positioners of pots, synchro, resolvers and switches

Sterling Inc., 3738 North Holton, Milwaukee 12, Wisc.
Motor operated valves

Sterling Mfg. Co., 7201 Wentworth St., Cleveland, Ohio
Battery testers and portable electrical instruments

Sterling Precision Corp., Instrument Div., 34-17 Lawrence St., Flushing 54, N. Y.
Electrical and electronic instrumentation

Sterling Transformer Corp., 297 N. 7th St., Brooklyn 11, N. Y.
Transformers; chokes

Stevens-Arnold Inc., 7, Elkins St., So. Boston 27, Mass.
D-c/a-c choppers commercial & military; ultra-high-speed relays

(See advertisement on page 183)

Stevens Mfg. Co., Inc., P. O. Box 1007, Mansfield, Ohio
Thermostats

Stevens Walden, Inc., 459 Shrewsbury St., Worchester 4, Mass.

Stevenson Mfg. Co., 1205 Washington St., La Porte, Ind.

Steward Mfg. Co., W. D., 3600 Jerome Ave., Chattanooga, Tenn.

Stewart Corp., F. W. 4311-13 Ravenswood Ave., Chicago 13, Ill.
Remote control and power drive flexible shafting; dual drive adapters; right angle adapters and angle drives

(See advertisement on page 195)

Stewart Die Casting Corp., 4525 Fullerton Ave., Chicago 39, Ill.

Stewart Instrument Co., 6507 Grand River Ave., Detroit 8, Mich.
Productive time and energy analyzers

Stewart, M. C., Ashburnham, Mass.
Meteorological instruments

Stewart-Warner Corp., 1826 Diversey Parkway, Chicago 14, Ill.
Tachometers and pressure gages

Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y.
Electrical instruments

(See advertisement on pages 108, 120, 208)

Still-Man Equipment Corp., 429 E. 164th St., New York 56, N. Y.

Stimpson Co., Inc., Edwin B., 70 Franklin Ave., Brooklyn 5, N. Y.

Stockdale Engineering Co., P. O. Box #144, Haddonfield, N. J.
Wynn diaphragm valves

Stocker & Yale, Inc., P. O. Box 8, Marblehead, Mass.
Optical instruments

Stoddart Aircraft Radio Co., Inc., 6644 Santa Monica Blvd., Hollywood 38, Cal.
Rf instruments; sound and noise analyzers; attenuators; broad band pulse generators

Stoelting, C. H. Co., 424 N. Homan Ave., Chicago 24, Ill.
Psychological, physiological research instruments; recorders

Stokes Corp., F. J., 5500 Tabor Road, Philadelphia, 20, Pa.
High-vacuum equipment; vacuum process equipment; high-vacuum pumps, gages; industrial tabletting presses; pharmaceutical tablet machinery; plastics molding presses

Stokes Molded Products Div., Electric Storage Battery Co., Taylor & Webster Sts., Trenton 4, N. J.

Stone Paper Tube Co., 900-922 Franklin St., N. E., Washington 17, D. C.
Spiral laminated tubes of electrical papers and plastic films

Stortz, John L., 405 State St., Watertown, N. Y.
Industrial and laboratory mercurial thermometers

Stow Manufacturing Co., 353 Shear St., Binghamton, N. Y.
Flexible shafts

Straham Valves, Inc., 16 Hudson St., New York 13, N. Y.
Liquid-level gages; automatic valves

Strand Engineering Co., 1354 N. Main St., Ann Arbor, Mich.
Transistor testing sets

Strasbaugh Engrg. Co., R. Howard, 10990 Santa Fe Ave., Lynwood., Calif.
Optical equipment, metal lapping machine

(See advertisement on page 130)

Stratex Instrument Co., 1861 Hillhurst Ave., Los Angeles 27, Calif.

Stratos, Div., Fairchild Engine & Airplane Corp., Bay Shore, L. I., New York
Aircraft air conditioning systems, auxiliary power turbines, fuel proportioners, compressors, pryogenic valves; electro magnetic relays

Streeter-Amet Company, Grayslake, Ill.
Automatic measuring, weighing and counting machines

Stromberg-Carlson Sub., Gen. Dynamic Corp., 113 Carlson Rd., Rochester 3, N. Y.

Stromberg Time Corp., 135 S. Main St., Thomaston, Conn.
Timing devices and time clocks

Struthers-Dunn, Inc., Lamp's Rd., Pitman, N. J.
Relays; timing devices

Studebaker Hydraulic Products Co., 1733 N. 33rd Ave., Melrose Park, Ill.
Laboratory presses

Stupakoff Division of Carborundum Co., Latrobe, Pa.
Ceramic thermocouple insulators and protection tubes thermistors

(See advertisement on page 129)

Sturdy Tool & Gage Co., 14520 Schaefer Highway, Detroit 27, Mich.
Precision tools and dimensional gages; torque gages; pressure and vacuum gages

Sturtevant Co., P. A., Addison, Ill.
Torque measuring equipment

(See advertisement on page 252)

Stylograph Corp., 205 W. Main St., Rochester 4, N. Y.

Wax-coated recording paper; charts, stylus; teletyper paper for multiple copies; paper for copies without carbon

Suffolk Products Corp., Woodbine and Scudder Aves., Northport, L. I., N. Y.
Fixed, rotating antennae; mechanical assemblies; servomechanisms; tube shields; precision machined parts; wired chassis; chassis frames; panels

Sullivan Varnish Co., 410 N. Hart St., Chicago 22. Ill.

Summerill Tubing Co., Bridgeport, Montg. Co., Pa

Summers Gyroscope Co., 2328 Broadway, Santa Monica Calif.
Automatic pilots, and gyro servos; gyroscopic flight indicating instruments

Sun Dial Corp., P. O. Box 326; Caldwell, N. J.

Sun Electric Corp., 6323 No. Avondale Ave., Chicago 31, Ill.
Electronic automotive test equipment; ground-support power source; test equipment for aircraft and guided missiles; electronic, and hydraulic systems

Sun Radio & Electronics Company, 650—6th Ave., New York 11, N. Y.
Radio parts and test equipment distributor

Sunshine Scientific Instrument, 1810 Grant Ave., Philadelphia 15, Pa.
Electrical and electronic instrumentation

Sunstrand Machine Tool Co., Sunstrand Hydraulic Div., 2210 Harrison Ave., Rockford, Ill.

Super Cut Inc., 3418 N. Knox Ave., Chicago 41, Ill.

Superdraulic Corp., U. S. Truck Rt. 27, Somerset, Kentucky
Hydraulic pumps; cylinders; valves; and remote control equipment

Superex Electronics Corp., 4 Radford Place, Yonkers, N. Y.
Single & double earphones; subminiature encapsulated inductances; miniature ferrite-core components for transistorized and printed circuits; inductors

Superior Air Products Co., 132 Malvern St., Newark 5, N. J.
Burettes

Superior Electric Co., 83 Laurel St., Bristol, Conn.
Variable transformers; voltage regulators; power supplies; 5-way binding posts

Superior Flux & Manufacturing Co., 1302 Ontario St., Cleveland 13, Ohio
Fluxes for welding, brazing and soldering

Superior Meter Co., Inc., 19 West 50th St., New York 20, N. Y.
Gas meters and appliances

Superior Steatite & Ceramic Corp., 85 W. Forest Ave., Englewood, N. J.

Superior Tube Co., P. O. Box 191, Norristown, Pa.
Fine tubing

Supreme Inc., Greenwood, Miss.
Radio testing equipment; tube testers; set testers; analyzers; test oscillators; oscilloscopes; dynamic instruments

Surface Checking Gage Co., 5880 Hollywood Blvd., Hollywood 28, Calif.
Surface roughness standards and comparators

Surface Combustion Corp., 2375 Dorr Ave., Toledo 1, Ohio
Heat treat furnaces

Surface Finishes, Inc., 12 Official Rd., Addison, Ill.
Optical flats

Surprenant Manufacturing Co., Clinton, Mass.
Plastic tubing and wire

Surty Mfg. Co., Inc., 4139 W. Kinzie St., Chicago 24, Ill.
Magnifiers

Suter, Alfred, 200 Fifth Ave., New York 10, N. Y.
Testing apparatus for textiles and metals

Suverkrop Instruments, Box 436, Bakersfield, Calif.
Drafting and surveying instruments

Swam & Co., R.E.S., 111 York St., Hanover, Penna.
Switchboards; control panels for diesel-generator sets; automatic controls

Swanson Engineering & Mfg. Co., 1133 E. Redondo Blvd., Inglewood 3, Calif.
Industrial control systems; prefabricated control centers; graphic and conventional panels

Swartwout Co., 18511 Euclid Ave., Cleveland 12, Ohio
Electronics process control systems and components

(See advertisement on page 34)

Swedish Gage Co. of America, 10641 Haggerty Ave., Dearborn 1, Mich.
Dimensional gages

Sweets Co., Martin, 114 S. 1st St., Louisville 2, Ky.
Special electric and electronic control and test equipment

Swieco, Inc., 1512 E. Lancaster, Fort Worth 3, Texas
Temperature indicators and controllers

Swift & Anderson Inc., 952 Dorchester Ave., Boston 25, Mass.
Weather instruments; binoculars; magnifiers

Swiss American Jewel Bearings Co., 32-30-58th St., Woodside, L. I., N. Y.
Jewel bearings

(See advertisement on page 122)

Swiss Jewel Co., 225 Lafayette Bldg., Philadelphia 6, Pa.
Sapphire and ruby jewel bearings

Swissomatic Products, 1818 Stanford St., Santa Monica, Calif.
Precision instrument parts

Switchcraft, Inc., 1328-30 N. Halsted St., Chicago 22, Ill.
Plugs and jacks; adapters; switches; microphone and phono connectors; cable assemblies; audio mixers

Switzer Bros., Inc., 4732 St. Clair Ave., Cleveland 3, Ohio
Daylight and ultraviolet paints, printing inks, fabrics, etc.; ultraviolet light sources

Sylvania Electric Products, Inc., 1740 Broadway, New York 19, N. Y.
Electronic instruments

Sylvania Electric Products, Inc., Parts Division, 12 2nd Ave., Warren, Pa.
Wire products

Synchro-Start Products, Inc., 8151 N. Ridgeway Ave., Skokie, Ill.
Safety control sets with visual and audible alarms; speed sensitive switches; solenoids

Synthane Corp., 5 River Rd., Oaks, Pa.
Laminated plastic products

Synthetic Gems & Jewels, Inc., Notre Dame St., Westfield, Mass.

Syntorque, Inc., 601 W. 26th St., New York 1, N. Y.
Electric motors and generators

Syntron Co., Homer City, Pa.
Metallic dry cell selenium rectifiers; vibrating feeders; hopper feeds; battery chargers; a-c to d-c power conversion units

System Analyzer Corp., 700 W. State St., Nokomis, Ill.
A-c network analyzer; phase converters

Systems Div., Beckman Instrs. Inc., 325 Muller Ave., Anaheim, Calif.
Special-purpose computers; industrial systems for measuring, recording and control

Systematics, Inc., 60 East 42nd St., New York 17, N. Y.
Computers; punched tape-to-card converters; integrated data processing equipment

Systron Corp., Concord, Calif.
Data handling, data logging systems; digital counters; converters

T

T. A. Mfg. Co., 4407 Alger St., Los Angeles 39, Calif.
Brackets; wire harness clamps; bonding clamps; multiple support clamps; shims; tube clamps, etc.

TAB (Technical Apparatus Builders), 111 Liberty St., New York 6, N. Y.
Power supplies; electrical and electronic components

(See advertisement on page 163)

Taber Instrument Corp., 111 Goundry St., North Tonawanda, N. Y.
Pressure transducers; transistor amplifiers; testers for stiffness, abrasion, and scratch resistance

Tablet & Ticket Co., 1019-1021 W. Adams St., Chicago 7, Ill.

Taft-Peirce Mfg. Co., 32 Mechanic Ave., Woonsocket, R. I.
Inspection and gaging equipment; surface grinders

Talboys Instrument Corp., 13 Ackerman Ave., Emerson, N. J.
Stirrers and accessories; special laboratory apparatus

Taller & Cooper, Inc., 75 Front St., Brooklyn 1, N. Y.
Wind tunnel instruments; panel boards

Tally Register, 5300 14th N.W. Seattle, Wash.
Digital data processing systems; high-speed X-Y plotters; pulse-width-to-digital converter

Tamms Industries Inc., 228 N. LaSalle St., Chicago 1, Ill.
Pyrometers

Taper Micrometer Corp., 100 Grove St., Worcester, Mass.
Dimensional gaging equipment; taper gages

Tarc Electronics, Inc., 48 Urban Ave., Westbury, L. I., N. Y.

Task Corp., 1009 E. Vermont Ave., Anaheim, Calif.
Aero-physics research equipment; tunnel and flight-test instrumentation; induction motors; commercial Baldwin strain gage appln

Taylor & Co., W. A., 7300 York Rd., Baltimore 4, Maryland
Equipment for pH and chlorine control, control of phosphates in boiler water and for water analysis

Taylor Dynamometer & Machine Co., 6411 River Parkway, Milwaukee 13, Wis.
Hydraulic dynamometers; balancing machines; sensitive drilling machines; precision drills

Taylor Electric, Inc., 15412 Dale St., Detroit 23, Mich.
Wiring duct

Taylor-Emmett Controls, Inc., P. O. Box 728, Akron 9, Ohio

Taylor Forge & Pipe Works, Inc., P. O. Box 485, Chicago 90, Ill.
Orifice flanges

Taylor Instrument Cos., 95 Ames St., Rochester 1, N. Y.
Indicating, recording and controlling instruments for temperature, humidity, pressure, rate of flow, and liquid level

Taylor Pivot Co., 1836 W. Jefferson St., Springfield, Ill.
Instruments pivots

Taylor Tubes, Inc., 6 N. Michigan Ave., Chicago 1, Ill.
Transmitting tubes; vacuum, gas & mercury-vapor rectifiers and thyratrons

Taylor-Winfield Corp., 1052 Mahoning Ave., Warren, Ohio
Welding equipment

Tech Labs., Inc., Bergen Blvd., Palisades Park, N. J.

Technic, Inc., 39 Snow St., Providence 1, R. I.

Technical Apparatus Builders, 109 Liberty St., New York 6, N. Y.

(See TAB)

Technical Appliance Corp., Sherburne, N. Y.
Antennas and allied equipment

Technical Associates, 140 W. Providencia Ave., Burbank, Calif.
Instruments for nuclear research including monitors; scalers; survey meters; lead shields; counters; Geiger and scintillation counters; film badge service

(See advertisement on page 179)

Technical Charts, Inc., 189 Van Rennselaer St., Buffalo 10, N. Y.
Circular, strip and rectangular charts; electro-sensitive charts; computer plotting paper

(See advertisement on page 69)

Technical Electronics Corp., 4060 Ince Blvd., Culver City, Calif.
Synchronous motors for tape recorders and similar precision equipment; system analyzers for comparison against a known standard; plug-in housings for electronic assemblies

(See advertisement on page 144)

Technical Material Corp., 700 Fenimore Rd., Mamaroneck, N. Y.
Communications systems

Technical Measurement Corp., 140 State St., New Haven, Conn.
Electrical and electronic instrumentation

Technical Oil Tool Corp., 1057 N. LaBrea Ave., Los Angeles 38, Calif.
Oil field survey equipment; gear trains; ordnance fuze mechanisms, timers, tachometers

Technical Paper Co., Inc., 2430 Linden Ave., E., Linden, N. J.
Conversion and development of technical papers for chart use in graphic recording instrument fields; slitting, printing by rotary process, punching, rerolling, etc.

Technical Products Co., 19 North Dunlap, Memphis 1, Tenn.
Laboratory supply house

Technical Products Co., 6670 Lexington Ave., Los Angeles 38, Calif.
Distributors of wave analyzers and graphic recording instruments

Technical Soldering Co., 2676 E. Walnut St., Pasadena, Calif.
Hermetic seals, metalized instrument windows, specialty soldering, copper brazing

Technicraft Laboratories, Inc., Thomaston-Waterbury Road, Thomaston, Conn.

Technicians Supply Co., P. O. Box 2337, San Antonio 6, Texas

(See advertisement on page 145)

Techniflex Corp., 55 Jersey Ave., Port Jervis, N. Y.
Level indicators and controllers; motor-operated valves, positioners, etc.

Technique Associates, Inc., 211 E. South St., Indianapolis 25, Ind.
Pyrometers and pyrometric testing equipment

(See advertisement on page 177)

Techniques Inc., 24 Fair St., Hackensack, N. J.
Printed circuits

Technitrol, Inc., Allegheny & Emerald Sts., Philadelphia, Pa.
Computers and their components

Techno Instrument Co., 6666 Lexington Ave., Los Angeles 38, Calif.
Electrical and electronic instruments

Technograph Printed Electronics, Inc., 185 Valley St., Tarrytown, N. Y.
Printed circuits; strain gages

Technology Instr. Div., Acton Labs., 531 Main St., Acton, Mass.
Special audio equipment

Techron Co., The, 254-256 Friend St., Boston 14, Mass.
Printed circuits

Teichert Engineering Co., 217-09 Merrick Blvd., Springfield Gardens, L. I., N. Y.
Glass engraving and blowing machinery

Tejax Engineering Corp., 180 Weeden St., P. O. Box 348, Pawtucket, R. I.
Valve-position-indicating handwheels

Tektronix, Inc., 9450 S.W. Barnes Rd., Portland, Ore.
Cathode-ray oscilloscopes and video test equipment

Telechrome, Inc., 28 Ranick Drive, Amityville, N. Y.
Photoelectric color comparators; Z-angle meters

Telechron Dept., General Electric Co., Ashland, Mass.
Instrument drives; fractional-hp motors

Telecomputing Corp., 12838 Saticoy St., North Hollywood, Calif.
Automatic data reading, recording and plotting equipment; card programmed calculators; autograph readers; digital plotters

Telecomputing Corp., Telecomputing Div., 12838 Saticoy Ave., No. Hollywood, Calif.
Automatic plotters; computers; counters; projectors

Tele-Dynamics Inc., 51st and Parkside Ave., Philadelphia 31, Pa.
Telemetering systems

Teleflex, Inc., P. O. Box 69, North Wales, Pa.
Control shafts, linkages and cables

Telemeter Magnetics, Inc., 2245 Pontius Ave., Los Angeles 64, Calif.
Ferrite cores; data processing systems; input-output equipment; large-scale memory systems

Teletronics Laboratory Inc., 54 Kinkel St., Waterbury, L. I., N. Y.
Precision electronic test equipment for laboratory and production use

Teletype Corp., 4100 Fullerton Ave., Chicago 39, Ill.
Printed communication equipment

Televiso Corporation, 1415 Golf Road, Des Plaines, Ill.
Radio and electronic parts

Televiso Products Inc., 7466 Irving Park Rd., Chicago 34, Ill.
Electronic products; custom built equipment

Telewave Laboratories Inc., see Polarad Electronics Co.

Telex, Inc., E-A Div., Telex Park, St. Paul, Minn.
Decade boxes; slip rings

Tel-Instrument Electronics Corp., 728 Garden St., Carlstadt, N. J.
Voltage regulators; electronic power supplies; vibration calibrators

Tell-Tronics Products, Inc., P. O. Box 495, Memphis 1, Tenn.
Temperature controls, indicators and testers

Teller Co., 357 N. Main St., P. O. Box 989, Butler, Pa.

Telonic Industries, 73 N. 2nd Ave., Beech Grove, Indiana
Sweep-signal and marker generator

Tempel Manufacturing Co., 1939 Bryn Mawr Ave., Chicago 26, Ill.
Magnetic steel laminations

Temperature Engineering Corp., U. S. Highway #130, Riverton, N. J.
Temperature processing equipment and accessories for research, industry, communications and transportation

Check Tensions
in Yarns, Wires, Rubber
Quick Trigger Action
SAXL TENSION METER
Tensitron, Inc., Harvard, Mass.

For more information circle **423** on inquiry card.

Tempil Corp., 132 W. 22 St., New York 11, N. Y.
Thermoscopic paint and thermometer sticks

Ten Bosch Inc., M., 80 Wheeler Ave., Pleasantville, N. Y.

Tennant Sons & Co., C., 100 Park Ave., New York 17, N. Y.

Tennessee Eastman Corp., Kingsport, Tenn.

Tenney Engineering, Inc., 1090 Springfield Rd., Union, N. J.
Design and manufacture of complete environmental test equipment; consultant for advanced requirements in missile and aircraft testing
(See advertisement on page 99)

Tensitron, Inc., Harvard, Mass.
Wire tension meters; rotating mercury pulse switch
(See advertisement on page 295)

Tensolite Insulated Wire Co., Inc., 198 Main St., Tarrytown, N. Y.
Miniature wire & cable; miniature coaxial cable, magnet wire

Teplitz, Henry H., 185 N. Wabash Ave., Chicago 1, Ill.
Audio frequency equipment; laboratory standard microphones

Testa Mfg. Co., 10122 East Rush St., El Monte, Calif.
Microscopes; borescopes; optical components; assemblies; sub-assemblies; optical engineering; optical and electrical military instruments; optical inspection and measuring instruments
(See advertisement on page 211)

Testing Equipment Co., 15 William St., New York 5, N. Y.
Instrument-shop tools and instruments

Testing Instruments, Inc., 242 Valley St., Dayton 4, Ohio
Electrical testing instruments for automotive equipment

Testing Machines, Inc., 123 W. 64 St., New York 23, N. Y.
Physical testing machines
(See advertisement on page 140)

Tetrad Co., 62 St. Mary St., Yonkers, N. Y.
Diamond phonograph needles, diamond pivots

Texas Apparatus Co., 2300 Congress Ave., Houston 3, Texas
Control systems and panels

Texas Div., Brush Electronics Co., 3732 Westheimer Rd., Houston 6, Texas
Photographic and magnet recording instruments for seismic exploration

Texas Instruments Incorporated, 6000 Lemmon Ave., Dallas 9, Texas
Electrical and electronic instrumentation; optical parts and materials; transistors; magnetic and strip chart recorders; seismological instruments; recording oscillographs
(See advertisement on pages 14-15)

Texas Instruments, Inc., Industrial Instrumentation Div., 2424 Branard St., P. O. Box 6027, Houston 6, Texas
Geophones; amplifiers; recorders; gravity meters; strip-chart rectilinear galvanometric recorders; automatic tank gaging equipment

Thayer Scale & Engineering Corp., Pembroke, Mass.

Texas Instruments, Inc., Optics Div., 104 W. Foothill Blvd., Monrovia, Calif.

Thelen Co., 7850 Woodley Ave., Van Nuys, Calif.

Thermador Electrical Mfg. Co., 2000 So. Canfield Ave., Los Angeles 22, Cal.
Transformers and magnetic components for guided missiles and radar

Thermal American Fused Quartz, 18-20 Salem St., Dover, N. J.
Optical and insulating parts and materials

Thermal Syndicate Ltd., 18 Salem St., Dover, N. J.
Laboratory apparatus; optical flats; gas and vapor discharge tubes; light sources: mercury vapor and ultraviolet; optical parts

Thermco Laboratories, Johnson Rd., Michigan City, Ind.
Industrial instrumentation; gas-analysis equipment
(See advertisement on page 110)

Thermel Inc., 9400 W. Robinson Rd., Franklin Park, Ill.
Industrial, commercial and domestic electric heating units

Thermix Corp., Greenwich, Conn.
Aircraft controls; valves, pressure and float switches for aircraft

Thermo-Couple Products Co., 1515 N. 25th Ave., Melrose Park, Ill.
Thermocouples; thermocouple connectors and connector panels

Thermo Electric Co., Inc., 109 Fifth St., Rochelle Park P. O., Saddle Brook, N. J.
Aircraft and industrial thermocouples, thermocouple wire and accessories; pyrometers, temperature controllers, indicators, recorders, monitoring systems, connector panels, resistance bulbs
(See advertisement on pages 176, 205, 213, 219)

Thermo Electric Manufacturing Co., 5112 Huff St., Dubuque, Iowa
Laboratory furnaces; automatic temperature controllers

Thermo Materials, Inc., 44 Encina Ave., Palo Alto, Calif.
Industrial ceramics, ferrites

Thermo Nuclear Wire Indust., 112-11 Northern Blvd., Corona 68, L. I., N. Y.

Thermo-Products Co., Inc., 3747 N. Palmer St., Milwaukee 12, Wis.
Thermocouples, base and noble metals, standard and special assemblies; automatic thermocouple butt welders

Thermometer Corp. of America, 567 E. Pleasant St., Springfield, Ohio
Temperature indicators; compasses

Thermosen, Inc., 361 W. Main St., Stamford, Conn.
Vacuum tubes

Thomas Co., Arthur, H., West Washington Square, Philadelphia 5, Pa.
Dealers, retail-wholesale-export, in laboratory apparatus & reagents for laboratories of chemistry and biology

Thomas & Betts Co., Inc., 36 Butler St., Elizabeth, N. J.
Terminals and connectors; coaxial cable connectors

Thomas & Skinner, Inc., 1118 E. 23rd St., Indianapolis, Ind.
Permanent magnets; electrical transformer and motor laminations

Thomaston Tool & Die Co., Bridge St., Thomaston, Conn.

Thompson Co., A. J., Route 1, Box 812, Florissant, Mo.
Sub-miniature precision electro-magnetic clutches and brakes

Thompson Balance Co., 802 E. 18 Ave., Denver 5, Colo.
Fine balances and weights

Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.
Electric stop clocks and interval timers

Thompson Products, Inc., Electronics Div., 2196 Clarkwood, Cleveland 3, Ohio
Coaxial, waveguide, and rotary selector switches; microwave components; magnetic amplifiers; discriminators; load sense units; missile and airplane controls; auxiliary controls

Thomson Industries, Inc., 1029 Plandome Rd., Manhasset, N. Y.
Bushings; nylon bearings

Thor Ceramics, Inc., 225 Belleville Ave., Bloomfield, New Jersey
Ceramic and epoxy insulators

Thordarson-Meissner Mfg. Div., Maguire Industries, Inc., 7th & Bellmont, Mt. Carmel, Ill.
Electrical and electronic instrumentation; components

Threadmiller Corp., 44 W. 44 St., New York 36, N. Y.
Thread-cutting tools

Three Point Industries, 3767 N. Racine Ave., Chicago 13, Ill.
Pipe gages

Thwing-Albert Instrument Co., 5323 Pulaski Ave., Philadelphia 44, Pa.
Pyrometers; papers testing instruments; portable pH meters; general testing instruments and machines

Tigerman Engineering Co., 4332 N. Western Ave., Chicago 18, Ill.
Alarm annunciator systems; switches; signals
(See advertisement on page 143)

Timely Instrument & Controls Co., 1645 W. 135th St., Gardena, Calif.
Magnetic servo amplifiers; miniature power type voltage references and supplies; voltage regulators

Times Facsimile Corp., 540 W. 58 St., New York 19, N. Y.
High speed recording and communications equipment; synchronous motors; audio frequency fork oscillators

Timetrol Co., 1715 Wedel Ave., Rockford, Ill.
Automatic timers

Tinnerman Products Inc., 2038 Fulton Rd., Cleveland 13, Ohio
Fasteners

Tinsley Laboratories, Inc., 2526 Grove St., Berkeley 4, Calif.
Precision optics; optical instruments and accessories; optical designing and engineering
(See advertisement on page 147)

Ti-Pi Co., 1000 Broadway, Kansas City 6, Mo.
Thickness gages

Tipp-Tronic, Inc., 4th & Franklin Street, Tipp City, Ohio
Electrical temperature controls

Titan Metal Mfg. Co., Bellefonte, Pa.

Titeflex, Inc., 500 Frelinghuysen Ave., Newark 5, N. J.
Metal bellows

Tobe Deutschmann Corp., Norwood, Mass.
Electrical and electronic instruments and components

Todd Scientific Co., 160 N. State Rd., Springfield, Pa.
Laboratory fractionating equipment; spectroscopes; pressure and vacuum controllers and gages; vacuum pumps

Toledo Scale Co., 1079 Telegraph Rd., Toledo 12, Ohio
Automatic Scale for weighing, counting, check-weighing, compounding, force-measuring, weight-printing and weight-recording; and special devices for testing, classifying and standardizing

Topflight Tape Co., 160 E. 9th Ave., North York, Penna.
Printed pressure-sensitive tape for identification and labeling

Topp Industries, Inc., 8907 Wilshire Blvd., Beverly Hills, Calif.
Precision potentiometers; angle-of-attack sensors and computing systems; intervalometers; portable wind tunnels; magnetics; heli-coil thread inserts

Tork Time Controls, Inc., 1 Grove St., Mt. Vernon, N. Y.
Clocks; timers; time controllers

Torq Engineered Products Inc., 50 W. Monroe St., Bedford, Ohio
Centrifugal switches; speed indicators, regulators

Torrance Glass and Color Works, 22922 S. Normandie Ave., Torrance, Calif.
Glass products; metal to glass seals; high temperature furnaces

Torrington Co., 557 Field St., Torrington, Conn.
Precision metal parts, metal forming machinery, cold-headed fasteners

Torsion Balance Co., Monhegan Ave., Clifton, N. J.
Analytical and laboratory balances and weights; micro hardness testers; combination hardness testers; subminiature toggle switches

Torwico Electronics, Inc., 1090 Morris Ave., Union, N. J.
Magnetic amplifiers; chokes; transformers

Tracerlab, Inc., 1601 Trapelo Rd., Waltham 54, Mass.
Radioactivity detectors; continuous thickness gages; nucleonics instrumentation; isotopes

Tracktest Equipment Co., Box 499, Franklin 1, Mich.
Speed-time recorders; fifth-wheel speedometers; odometers

Trad Electronics Corp., 1001 First Ave., Asbury Park, N. J.
Attenuators; oscilloscopes; signal generators; closed circuit TV projectors

Traid Corp., 17136 Ventura Blvd., Encino, Calif.
Missle-scoring systems, photographic and optical systems, synchronous cameras

Transformer Engineers, 325 N. Halstead St., Pasadena, Calif.
Transformers; reactors; wave filters; saturable core components

Transformers, Inc., 200 Stage Road, Vestal, N. Y.
Transformers; magnetic amplifiers

Trans-Gel Products, Inc., 212-40 Jamaica Ave., Queens Village, N. Y.

Transistor Products, Inc., 241 Crescent St., Waltham 54, Mass.
Electronic components; photoelectric devices

Transitron Electronic Corp., 168 Albion St., Wakefield, Mass.

Transmag Div., California Magnetic Control Co., 11922 Valerio St., North Hollywood, Calif.

Trans-Sonics, Inc., P. O. Box 328, Lexington 73, Mass.
Transducers for measurement and control

Transval Engineering Corp., 10401 W. Jefferson Blvd., Culver City, Calif.
Transistorized power supplies and amplifiers; transistorized airborne communications and navigation equipment

Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

Trans-Weigh Co., 114 S. Wayne Ave., Wayne, Pa.
Continuous weighing systems; gravimetric flow-rate meters

Trenton Transformer Corp., P. O. Box 568-A Trenton, N. J.
Instrument, regulating, and testing transformers; magnetic components

Trerice Co., H. O., 1420 W. Lafayette Blvd., Detroit 16, Mich.
Temperature and pressure instruments, steam traps

Tri-Dex Electronics, P. O. Box 1207, Lindsay, Calif.
Amplifiers; etched circuitry; special coils; terminal boards; wired electronic assemblies

Tri-Tronics Co., 2607 St. Charles Rd., Bellwood, Ill.
Miniature photoelectric systems for counting, registry, and general machine control

Triad Transformer Div., Litton Indus., Inc., 4055 Redwood Ave., Venice, Calif.
Coils; toroids; filters; reactors; hermetically sealed terminals; audio transformers; power filaments; high and low frequency isolation

Trimount Instrument Company, 3119-21 W. Lake St., Chicago 12, Ill.
Manometers; well type, sliding scale U-tube, fixed scale U-tube, inclined, absolute pressure, and service; gages; draft and mercury pressure; indicating flow meters; tank level indicators

Triner Scale & Mfg. Co., 2714 W. 21st St., Chicago 8, Ill.
Scales and service

Trinity Equipment Corp., 472 Westfield Ave., East, Roselle Park, N. J.
Single and double-bore thermowells; thermocouple assemblies

Trio Laboratories, 4025 Merrick Rd., Seaford, N. Y.
Miniature electronic instruments for panel-mounting, power supplies, electronic power generators
(See advertisement on page 65)

Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio
Electrical measuring instruments, panel and portable types; electrical test equipment

Triumph Mfg. Co., 1829 So. 55th Ave., Chicago 50, Ill.
Radio test instruments

Troemner, Henry, 22nd & Master Sts., Philadelphia 21, Pa.
Balances

Truline Process Co., 7027 Pennsylvania Ave., St. Louis 11, Mo.

Tru-Ohm Products Div., Model Engineering & Manufacturing, Inc., 2800 Milwaukee Ave., Chicago 18, Ill.
Wire wound vitreous enamel resistors; power rheostats

Tube-Turns Plastics, Inc., 2929 Magazine St., Louisville 11, Ky.
Valves; pipe fittings; custom molded parts of polyvinyl chloride

Tung-Sol Electric Inc., 95 8th Ave., Newark 4, N. J.
TV and special-purpose electron tubes; semiconductor products; signal lamps

Tungsten Contact Mfg. Co., 7311 Cottage Ave., North Bergen, N. J.

Tuttle & Co., W. H., Adrian, Mich.

Tuttle & Kift, Inc., 1823 N. Monitor Ave., Chicago 39, Ill.

U

U C Indicator Co., 624 E. Locust St., Milwaukee 12, Wis.
Liquid level gages

Uehling Instrument Co., 470 Getty Ave., Paterson 3, N. J.
Draft gages and recorders; liquid level gages and controllers; pressure and vacuum gages; recorders and controllers; manometers; barometers; gas analyzers
(See advertisement on page 300)

Uhrig Co., Joseph F., 4101-03 N. Fifth St., Philadelphia 40, Pa.
Scientific glassware

Ulanet Co., George, 413-15 Market St., Newark 5, N. J.
Thermostats; time-delay relays; miniature heaters
(See advertisement on page 224)

Ultradyne Engineering Labs., Inc., P. O. Box 3308, Albuquerque, N. Mex.
Electromechanical transducers

Ultrasonic Corp., 640 Memorial Dr., Cambridge 42, Mass.
Computers, accessories, components; data processing and remote control equipment; microwave and ultrasonic equipment; electronic instrumentation

Ultra-Violet Products, Inc., 5114 Walnut Grove Ave., San Gabriel, Calif.
Ultraviolet lamps for flourescence analysis in laboratory, research, chromatography, industrial testing, leak and flow, sanitation detection

Underwood Corp., 1 Park Ave., New York 16, N. Y.

Underwood Corp., Electronic Computer Div., 35-10 36th Ave., Long Island City 6, N. Y.
Digital computers; computers components; delay lines

Unertl Optical Co., John, 3551-3555 East St., Pittsburgh 14, Pa.
Optical instruments

Ungar Electric Tools Inc., 4101 Redwood Ave., Los Angeles 66, Calif.
Electric soldering irons with interchangeable heating units and tiplets
(See advertisement on page 197)

Uniflow Valve Corp., 19 Quine St., Cranford, N. J.
Automatic control valves; valve positioners

Uniform Tubes, Level Road, Collegeville 2, Pa.
Precision tubes of all metals

Unimax Switch Div., W. L. Maxson Corp., Ives Rd., Wallingford, Conn.
Switches

Union Carbide Chemicals Co., 30 E. 42nd St., New York 17, N. Y.

Union Switch & Signal Div., Westinghouse Air Brake Co., Pittburgh 18, Pa.
Automation and remote control equipment for railways, pipelines, steel mills, mining industry; electronic flight simulators; missile ground handling equipment; air traffic control systems
(See advertisement on page 7)

Unistrut Products Co., 933 W. Washington Blvd., Chicago 7, Ill.
Racks; fluorescent fixture supports

Unit Process Assemblies, Inc., 61 E. 4th St., New York 3, N. Y.
Thickness testers; periodic polarity reversers for plating application

United-Carr Fastener Corp., 31 Ames St., Cambridge, Mass.

United Catalog Publishers, Inc., 60 Madison Ave., Hempstead, N. Y.

United Control Corp., 4540 Union Bay Place, Seattle 5, Wash.
Electronic control systems for aircraft and guided missiles, test equipment

United Electric Co., Engrg. Div., 3938 W. Roosevelt Rd., Chicago 24, Ill.
Electrical indicating instruments

United Electric Controls Co., 85 School St., Watertown 72, Mass.
Temperature, pressure and vacuum controls

United Electronics Co., 42 Spring St., Newark 2, N. J.
Vacuum capacitors and vacuum tubes

United Engineers, Inc., 824 E. Sixth St., Tulsa 24, Okla.
Industrial measurement and control equipment; radioactivity instrumentation

United Instrument Co., 574 President St., Brooklyn 15, N. Y.
Pressure and temperature instrumentation
(See advertisement on page 166)

United Lens Co., 259 Worcester St. Southbridge, Mass.
Optical instrument blanks ready to grind

United Mfg. Co., Div., W. L. Maxson Corp., 41 Haig St., Hamden 14, Conn.
Aircraft test equipment

United Optical Mfg. Corp., 202-4 E. 19th St., New York 3, N. Y.
Electrical measuring instruments

United Scientific Co., 204 Milk St., Boston 9, Mass.
Microscopes; including metallurgical, stereoscopic, laboratory, astronomical telescopes

United Screw & Bolt Corp., 2513 W. Cullerton, Chicago 8, Ill.

United Shoe Machinery Corp., 140 Federal St., Boston, Mass.

United States Blue Print Paper Co., 111 N. Wacker Dr., Chicago 6, Ill.
Surveying instruments

U. S. Components, Inc., 454 E. 148th St., New York 55, N. Y.
Connectors

U. S. Controls Co., 71 A St., Boston, Mass.

U. S. Electrical Motors, Inc., P. O. Box 2058, Terminal Annex, Los Angeles 54, Calif.
Speed control equipment; motors; generators

U. S. Electronic Development Corp., 1323 Air Way, Glendale 1, Calif.
Polystyrene, mylar, teflon capacitors; paper, metallized paper, and metallized mylar condensers

United States Electronics Corp., 275 Warren St., Lyndhurst, N. J.
Electrical filters, chokes and transformers; solenoids

U. S. Expansion Bolt Co., Standard Div., York, Pa.
Dimensional gages

U. S. Gasket Co., 600 N. 10th St., Camden 1, N. J.

United States Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
Indicating and recording pressure gages and thermometers
(See advertisement on page 21)

U. S. Gear Corp., 71 Broadway, Wakefield, Mass.
Fine-pitch precision gears
(See advertisement on page 153)

U. S. Indestructible Gasket Co., 829 E. 15th St., Brooklyn 30, N. Y.

United States Instrument Corp., P. O. Box 33, Charlottesville, Va.
Voice-powered telephone equipment

United States Radium Corp., Morristown, N. J.
Screened, lithographed, etched, photo-reproduced instrument dials, panels, nameplates; edge lighted plastic panels; TV phosphors; radioactive products; X-ray screens

U. S. Relay Co., 1744 Albion St., Los Angeles 31, Calif.
Relays; solenoid contactors; packaged electronic systems

United States Rubber Co., 1230 Ave. of the Americans, New York 20, N. Y.

U. S. Stoneware Co., P. O. Box 350, Akron 9, Ohio
High-alumina ceramic shapes; ceramic-to-metal seals

United States Testing Co., Inc., 1415 Park Ave., Hoboken, N. J.
Testing machines and instruments; accessory equipment

United States Time Corp., 500 Fifth Ave., New York 36, N. Y.
Gyroscopes

United Transformer Corp., 150 Varick St., New York 13, N. Y.
Wave filters; high-Q coils; magnetic amplifiers; transformers; reactors

Unitek Corp., P. O. Box 5515, Pasadena, Calif.
Automatic welding machines

Unitronics, Inc., P. O. Box 191, Ferguson 21, Mo.
Light integrators; photoelectric controls

Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.
Testing machines and instruments

Universal Blank Co., Inc., 79 North Rd., Southbridge, Mass.

Universal-Cyclops Steel Corp., Drawer 153, Bridgeville, Pa.

Universal Drafting Machine Co., 7960 Lorain Ave., Cleveland 2, Ohio
Drafting machines

Universal Electronics Co., 1720 22nd St., Santa Monica, Calif.
Dc regulated and unregulated power supplies, including electronically controlled supplies and magnetic-amplifier controlled supplies
(See advertisement on page 162)

Universal Engineering & Colorplate Co., Inc., 980 Elliott St., Buffalo 8, N. Y.

Universal Engraving & Color Plate Co., see Engineers Specialty Div.

Universal Metal Hose Co., 2133 S. Kedzie Ave., Chicago 23, Ill.
Flexible metal hose products

Universal Relay Corp., 42 White St., New York, N. Y.
Supply house for relays, switches and other electrical-electronic components
(See advertisement on page 182)

Universal Scientific Co., Inc., 1102 Shelby St., Vincennes, Ind.
Transformers; electrical teaching aids

Universal Transistor Products Corp., 143 E. 49th St., New York 17, N. Y.
Transistorized circuits; systems; lightweight power supplies (up to 100,000 volts or 300 watts); radiation detection instruments for military, laboratory, medical, civilian defense and surveying use

Universal X-Ray Products, Inc., 1140 Western Ave., Chicago 22, Ill.
High-voltage coils; x-ray timing devices; machining of castings; stamping of transformer laminations

Univis Lens Company, 401 Leo St., Dayton 1, Ohio
Optical flats; lenses; prisms

Urbana Engineering Prod. Div., Carl A. Bays & Assocs., Inc., P. O. Box 65, Urbana, Ill.

Utility Supply Co., 229 S. Wabash Ave., Chicago 4, Ill.
Office furniture and machines; portable calculators

V

V & E Manufacturing Co., 758 S. Fair Oaks Ave., Pasadena 20, Calif.
Drafting machines; drafting room instruments

Vaco Products Co., 317 E. Ontario St., Chicago, Ill.
Instrument-shop tools; solderless terminals and terminal crimping tools

Vacutron, Inc., 2819 12th St., So., Arlington, Va.
Special vacuum tubes; electronic circuits and industrial control devices

Vacuum Film Products Div., Servomechanisms, Inc., 316 Washington St., El Segundo, Calif.

Vacuum Research Co., 420 Market St., San Francisco 11, Calif.
Automatic-control valves; gaskets and seals

Vacuum Tube Products Co., Inc., 506 S. Cleveland St., Oceanside, Calif.
Cathode-ray tubes; thyratrons; rectifiers; vacuum-gage tubes and controls; spot and seam welders; fractional cycle timers

Valco, Inc., 1410 West St., Cincinnati 15, Ohio
Automatic valves

Valcor Engineering Corp., Carnegie Ave., Kenilworth, N. J.
Solenoid valves, pneumatic and hydraulic

Valley-National Corp., Clarke St., Milldale, Conn.

Vallorbs Jewel Co., P. O. Box 958, Lancaster, Penna.
Swiss precision automatic screw machine products, industrial jewel bearings; sapphire stylii

Valor Electronics Components Co., 13214 Crenshaw Blvd., Gardena, Calif.
Miniature pulse transformers; magnetic shift register components; magnetic storage components

Valpey Crystal Corp., 1244 Highland St., Holliston, Mass.
Standard-frequency crystals; crystal-oscillator ovens

Valvair Corp., 454 Morgan Ave., Akron 11, Ohio
Control valves

Valve Pilot Corp., 230 Park Ave., New York 17, N. Y.
Locomotive speed and cut-off indicators and recorders

Valv-Trol Co., 573 Baird St., Akron 11, Ohio
Pressure controllers; control valves; accessories

Van Keuren Co., 176 Waltham St., Watertown, Mass.
Precision measuring tools and gages

Van Wagner Co., 89-04 113 St., Richmond Hill 18, N. Y.
Inspection devices

Vanguard Instrument Corp., 184 Casper St., Valley Stream, L. I., N. Y.
Oscilloscopes; photogrammetric instruments

Vanton Pump & Equipment Corp., Div. of Cooper Alloy Corp., 201 Sweetland Ave., Hillside 5, N. J.
Metering and proportioning pumps; plastic pipe and fittings; valves

Vapor Recovery Systems Co., 2820 N. Alameda St., Compton, Calif.
Liquid level gages, manometers, remote metering equipment; control valves
(See advertisement on page 210)

Varian Associates, 611 Hansen Way, Palo Alto, Calif.
Spectrometers; electromagnets; power supplies, graphic recorders; magnetometers; linear accelerators

Vari-L Co., Inc., P. O. Box 1433, Stamford, Conn.
Variable inductors (saturable reactor type) for use in r-f and a-f sweep oscillators, frequency modulators, and afc systems
(See advertisement on page 81)

Varo Mfg. Co., 2201 Walnut St., Garland, Texas
Frequency standards; frequency meters; frequency power converters; communication equipment; regulated dc supplies

Vector Electronic Co., Grand Central Air Terminal, Glendale, Calif.
Structures for electronic circuitry
(See advertisement on page 71)

Vectrol Engineering, Inc., P. O. Box 1089, Stamford, Conn.
Servo amplifiers; electrical control systems; phase shifters

Vectron Inc., Route 128, at Trapelo Road, Waltham 54, Mass.
Electronic and electromechanical equipment and instrumentation, including microwave spectrum analyzers, microwave test equipment, variable frequency ac power supplies, and precision components

Veeco Vacuum-Electronic Engineering Co., 86 Denton Ave., New Hyde Park, L. I., N. Y.
High-vacuum equipment

Veeder-Root Inc., Hartford 2, Conn.
Mechanical and electrical counting and computing devices for military, civilian and special counting requirements
(See advertisement on page 85)

Versa Products Co., Inc., 249 Scholes St., Brooklyn 6, N. Y.
Motorized valves

Vibra Shock Corp., 5232 River Rd., Washington 16, D. C.
Vibration and acceleration instrumentation

Vibration Measurement Engineers, 7665 Sheridan Rd., Chicago 26, Ill.
Seismographs

Vibration Mountings, Inc., 98-13 50th Ave., Corona 68, L. I., N. Y.
Vibration control mountings and materials

Vibration Research Labs., Inc., 97 Lake Ave., Tuckahoe, N. Y.

Vibro-Ceramics Corp., 212 Durham Ave., Metuchen, N. J.

Vickers Electric Div., Vickers, Inc., 1815 Locust St., St. Louis 3, Mo.
Rectifiers and photoelectric cells

Vickers, Inc., 1400 Oakman Blvd., Detroit 32, Mich.
Pumps and valving devices for control of power in oil-hydraulic systems

Victor Animatograph Corp., P. O. Box 112, Plainville, Conn.
Motion picture projectors; magnetic recording attachments for projectors, micro-projectors

Victor Laboratory, J. N., 701 Lechauweki Ave., Bethlehem, Pa.
Testing instrumentation; oscillographs; scientific cameras

Victoreen Instrument Co., 3806 Perkins Ave., Cleveland 14, Ohio
Encapsulated resistors; electrometer tubes; regulator tubes; reactor monitoring equipment; reactor instrumentation; personal and area dosimeters; survey meters

Victory Engineering Corp., 115 Springfield Rd., Union, N. J.
Analyzing; detecting and automatic control instruments; thermistors

Video Instruments Co., Inc., 2340 Sawtelle Blvd., Los Angeles 64, Calif.
Vidon, Custom Cases 68

Viking Copper Tube Co., 16700 St. Clair, Cleveland, Ohio
Seamless Copper Tube

Viking Industries, Inc., 21343 Roscoe Blvd., Canoga Park, Calif.
Connectors and jacks; molded plastic products; servo amplifiers

Viking Instruments Inc., 9 Sylvan St. East, Haddam, Conn.
Tachometers, switches, remote control equipment

Vinco Corp., 9111 Schaefer Highway, Detroit 28, Mich.
Special gages

Virginia Electronics Co., River Road & B&O R.R., Washington 16, D. C.
Communications control systems; meteorological instruments; power supplies; coils, transformers

Visco-Meter Corp., 315 Grote St., Buffalo 7, N. Y.
Viscosimeter

Vitramon, Inc., Box 544, Bridgeport, Conn.
Capacitors, high stability, low loss component, a laminent of porcelain and fine silver; completely insulated and with unitized lead electrode structure
(See advertisement on page 67)

Vocaline Co. of Am., Inc., Bristol Motor Div., 111 Coulter St., Old Saybrook, Conn.
Carrier communication systems; automatic-control systems; time and program controllers; relays and switches

Vogley & Lackman, 192½-196 Green St., New York, N. Y.

Voland & Sons, Inc., 32 Relyea Pl., New Rochelle, N. Y.
Analytical balances & weights Communication measuring instruments

Volkers & Schaffer Mfg. Corp., Box 996, Schenectady, N. Y.
Oscillographs and oscilloscopes; components

Vought Co., P. O. Box 1350, Beverly Hills, Calif.
Photographic data recorders, pulse and high speed; photographic data reduction & test devices

Vulcan Rubber Products, 54 Worth St., New York 7, N. Y.

W

W-K-M Mfg. Co., Inc., 221 Roberts St., Houston, Texas

Wabash Insts. and Specialties Co., Box 194, Wabash, Indiana
Hydraulic presses; constant temperature tanks

Wabash Metal Products Co., 1569 Morris St., Wabash, Ind.
Laboratory presses, 3 to 50 tons

WacLine, Inc., 35 So. St. Clair St., Dayton 2, Ohio
Adjustable speed ac drives; microwave components; electrical indicating instruments

Wade Tool Co., 49 River St., Waltham 54, Mass.
Electric clutch hand turret lathes; hand screw machines; standard precision lathes; toolmakers precision lathes

Wagner & Son, Carl H., 1944 N. Albany Ave., Chicago 47, Ill.
Thermometers

Wagner Co., Inc., Charles A., 4455 N. 6th St., Philadelphia 40, Pa.

Wakefield Industries, Inc., 5108 W. Grove St., Skokie, Ill.
Fractioning columns; pipettes, etc.

Wakmann Watch Co., Inc., 15 W. 47th St., New York 36, N. Y.
Stop watches and chronometers
(See advertisement on page 225)

Waldes Kohinoor, Inc., 47-16 Austel Place, Long Island City 1, N. Y.
Retaining rings; pliers; accessory tools; slide fasteners

Waldom Electronics, Inc., 4625 W. 53rd St., Chicago 32, Ill.
Instrument and electronic hardware

Walker & Co., Geo. T., 324 Fifth Ave., South, Minneapolis 15, Minn.
Laboratory supplies

Walker Div., The, Norma-Hoffman Bearings Corp., Hamilton Ave., Stamford, Conn.
Power Supplies

Walker-Jamieson, Inc., 311 S. Western Ave., Chicago 12, Ill.
Radio and electronic components

Walkirt Co., 141 W. Hazel St., Inglewood 3, Calif.
Transistorized and vacuum-tube packaged circuitry for pulse-handling or digital-computer field

Wall Colmonoy Corp., 19345 John R. St., Detroit 3, Mich.
Brazing and welding materials

Wallace & Tiernan Inc., 25 Main St., Belleville 9, N. J.
Chemical control equipment; volumetric dry feeders; gravimetric feeders and meters; vacuum and pressure indicators altimeters; navigational aids; chemicals; pharmaceuticals; plasticizers; fatty acids; food-handling machinery
(See advertisement on page 138)

Wallson Associated Ltd., 963 Frelinghuysen Ave., Newark 5, N. J.
Specialized test and process equipment

Walser Automatic Timer Corp., 420 Lexington Ave., New York 17, N. Y.
Timers

Waltham Horological Corp., 395 Lynnway, Lynn, Mass.
Rf coaxial cable connectors; telephone plugs and jacks

Waltham Precision Instrument Co., Inc., Waltham, Mass.

Waltham Precision Tool Co., 94 Walnut Hill Rd., Brookline, Mass.

Waltham Screw Co., 77 Rumford Ave., Waltham 54, Mass.

Wang Laboratories, 37 Hurley St., Cambridge 41, Mass.
Specialized computing systems; data handling systems; machine tool control systems; programmed pulse sequence generators; magnetic core devices

Ward Leonard Electric Co., 115 MacQuesten Parkway South, Mount Vernon, N. Y.
Resistors, rheostats; relays; motor starters, speed controllers; voltage regulators; electric control devices

Warner & Swasey Co., 5701 Carnegie Ave., Cleveland 3, Ohio
Telescopes

Warner & Swasey Research Corp., 34 West 33 St., New York 1, N. Y.
Automatic inspection and gaging equipment; tape-programmed automatic inspection and gaging equipment; tape-controled automatic positioning systems

Warner Electric Brake and Clutch Co., Beloit, Wisc.
Electric brakes, clutches, and controls

Warren Bros. Mfg. Co., 32 Potter St., Cambridge, Mass.
High-speed centrifuges and centrifugal spin test machines; cabinets; chassis

Warren Engineering Co., Route 24, Broadway, N. J.
Regulating control valves

Warren-Knight Co., 136 N. 12th St., Philadelphia 7, Pa.
Surveying instruments and equipment

Warren Wire Co., Pownal, Vermont

Warrick Co., Charles F., 1964 West 11 Mile Rd., Berkley, Mich.
Relays and auxiliary equipment for liquid level controls

Warrick, Frederick P., Rt. No. 1, W. Long Lake Rd., Bloomfield Hts., Mich.
Scientific cameras

Water Leak Detector Co., 114 N. Third St., Columbus 15, Ohio
Water leak detectors

Water Level Controls Div., Healy-Ruff Co., 2255 University Ave., St. Paul 14, Minn.
Electric pump and pump system controllers

Waterbury Companies, Inc., P. O. Box 1032, Waterbury 20, Conn.

Waterman Engineering Co., 721 Custer Ave., Evanston., Ill.
High pressure hydraulic valves; filters; check valves; solenoid valves; pressure compensated flow regulators

Waterman Products Co., Inc., 2445 Emerald St., Philadelphia 25, Pa.
Portable oscilloscopes; cathode-ray tubes
(See advertisement on pages 10, 11)

Waters Mfg. Inc., P. O. Box 368, South Sudbury, Mass.
Precision miniature wire-wound potentiometers

Watlow Electric Manufacturing Co., 1376 Ferguson Ave., St. Louis 14, Mo.

Watts Regulator Co., P. O. Box 810, Lawrence, Mass.
Devices for filtration and lubrication of air; pressure reducing valves for control of air, steam and water

Waugh Engineering Co., 7842 Burnet Ave., Van Nuys, Calif.
Turbine-type fluid flow pickups; anemometers; tachometer generators; electronic converters for indicating or recording flow, speed, RPM
(See advertisement on page 106)

Waukee Engineering Co., 5137 N. 35th St., Milwaukee 9, Wisc.
Flowmeters for industrial gases; gas-air mixers; industrial washing machines

Waxon-Carboff, Inc., 8 Commercial St., Rochester 14, N. Y.
Wax coated recording chart paper, electrosensitive and spark
(See advertisement on page 69)

Weatherhead Co., Fort Wayne Div., 128 W. Washington Blvd., Ft. Wayne, Ind.
Tube fittings; flexible hose; power steering and brake hose assemblies; drain and shut-off cocks

Webb Co., Jervis B., 8951 Alpine Ave., Detroit 4, Mich.

Webber Gage Co., 12904 Triskett Rd., Cleveland, 11, Ohio
Gage blocks

Webber Engineering Corp., 24 S. Keystone Ave., P. O. Box 217, Indianapolis 6, Ind.
Environmental test cabinets, simulating high and low temperatures, including pressure and humidity; industrial freezers for shrink fitting and testing.

Weber Co., F., 1220 Buttonwood St., Philadelphia 23, Pa.
Drafting equipment and supplies

Weber Bros., Metal Works, 108 N. Jefferson St. Chicago 6, Ill.
Laboratory apparatus

Webster Instrument, Inc., 11856 Mississippi Ave., Los Angeles 25, Calif.
Hardness tester, force gage

Weckesser Co., 5701 N. Northwest Highway, Chicago 30, Ill.
Clips, strappings, etc.

Weighing & Control Components, Inc., 206 Lincoln Ave., Hatboro, Pa.
Industrial scales

Weinschel Engineering Co., Inc., 10503 Metropolitan Ave., Kensington, Md.
Step attenuators; coaxial attenuator pads; coaxial terminations; bolometer preamplifiers; insertion loss test sets

Weiss & Son, Inc., Albert A., 261-263 Vanderbilt Ave., Brooklyn 5, N. Y.
Industrial thermometers, mercury-in-glass, indicating, for pipe line, tank mounting and portable use; plastic encased dough thermometers
(See advertisement on page 220)

Weksler Thermometer Corp., 195 E. Merrick Rd., Freeport, L. I., N. Y.
Instruments for indicating and recording temperature, pressure, and humidity, including mercury-in-glass and filled capillary systems
(See advertisement on page 222)

Welch Allyn, Inc., Skaneateles, N. Y.
Inspection lights; illuminated medical diagnostic instruments; special miniature lamps

Welch Manufacturing Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
Electrical instruments, high vacuum pumps, for science laboratories; densitometers, balances, scales, stirrers supplies

Weldmatic Div., Unitek Corp., 380 N. Halstead, Pasadena, Calif.
Precision stored-energy spotwelders in portable, bench and console models for joining metals from 0.0003" to 0.095"

Weller Electric Corp., 601 Stone's Crossing Rd., Easton, Pa.
Soldering irons

Welwyn International, Inc., 3355 Edgecliff Terrace, Cleveland, Ohio

West Coast Elec. Mfg. Corp., 233 W. 116th Place, Los Angeles 61, Calif.
Solenoids

West Coast Electronics Co., Div., Litton Industries, Inc., 9261 W. Third St., Beverly Hills, Calif.

West & Dodge Thread Gauge Co., Inc., 6 Power House St., South Boston, Mass.
Screw thread gages

West Instrument Corp., 4363 W. Montrose Ave., Chicago 41, Ill.
Temperature controllers, indicators, recorders; accessory equipment

Westberg Mfg. Co., 144 S. Coombs St., Napa, Calif.
Speed indicators; auto and marine tachometers and service instruments

Western Brass Mills Div., Olin Industries, Inc., East Alton, Ill.

Western Gear Corp., Electro Products Div., Box 182, Lynwood, Calif.
Miniature rotary electrical equipment including motors up to 2 hp; converters; alternators; generators; fans and blowers

Western Lithograph Co., Westline Products Div., 600 E. 2nd St., Los Angeles 54, Calif.
Pipe and wire markers; marking tapes and fabrics

Western Radiation Lab., 1107 W. 24 St., Los Angeles 7, Calif.
Radioactivity detecting and measuring instruments; meg-megohmmeters; electron tubes

Western Rubber Co., 9th & Douglas Sts., Goshen, Ind.

Western Union Telegraph Co., 60 Hudson St., New York 13, N. Y

Westinghouse Air Brake Co., Industrial Products Div., Wilmerding, Pa.
Pneumatic control equipment; force and positioning devices for aircraft use

Westinghouse Electric Corp., 3 Gateway Center, P. O. Box 2278, Pittsburgh 30, Pa.
Switchboard, panel and portable measuring instruments, aircraft instruments, recorders, industrial and radio test set equipment; electric and electronic instrumentation and automation devices

Westinghouse Electric Corp., Lamp Div., Bloomfield, N. J.

Westinghouse X-ray Co., Inc., 2519 Wilkins Ave., Baltimore 3, Md.
Industrial X-ray equipment

Westline Products Div., Western Lithograph Co., 600 E. 2nd St., Los Angeles
Wire markers

Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark 12, N. J.
Switchboard, panel and portable measuring instrument; industrial and radio test equipment; light measuring instruments and photographic exposure meters; dial type industrial temperature gages; control relays and aircraft instruments; indicating, recording and controlling instruments

Westport Electric Co., 149 Lomita St., El Segundo, Calif.
Electronic digital counting and frequency measuring instruments

Westronics, Inc., 3605 McCart St., Fort Worth 10, Tex.
Special electronic electrical and electromechanical instruments; miniature recording potentiometer

Wheaton Co., R. W., 319 Mt. Pleasant Ave., Newark 4, N. J.

Wheaton Co., T. C, Millville, N J.
Glassware

Wheatstone Corp., Foster, Ky.
Thermocouples and pyrometer tubes

Wheelco Instrument Div., Barber-Colman Co., 1300 Rock St., Rockford, Ill.
Process control instrumentation

Wheeler Insulated Wire Co., Inc., 150 E. Aurora St., Waterbury 20, Conn.
Coils; assemblies; open-frame metal encased, oil filled, fosterite, miniature series, pulse, resin cast transformers; power supplies

Wheelock Signals, Inc., 273 Branchport Ave., Long Branch, N. J.

Whiddett Co., John C., No. 9 Union Ave., Bala-Cynwyrd, Pa.
Control systems

White Co., Inc., David, 315 W. Court St., Milwaukee 12, Wis.
Surveying instruments

White Dental Mfg. Co., S. S., 10 E. 40 St., New York 16, N. Y.

White Industrial Div., S. S., 10 E. 40th St., New York 16, N. Y.
Standard and special purpose resistors; temperature-responsive elements

White Instrument Laboratories, Box 9006, Allendale St., Austin 17, Texas
Filters; networks and amplifier-filters

White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.
Furnace Controls

Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.

Whitey Tool & Die Co., 1150 55th St., Oakland, Calif.
Metering pumps; needle valves; accessories

Whitney Blake Co., New Haven 14, Conn.

Whittaker Gryo Div., Telecomputing Corp., 16217 Lindbergh Ave., Van Nuys, Calif.
Designers and manufacturers of aircraft instruments and gyro devices

Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.
Testing machines; pressure instrumentation; vacuum pumps

Wiancko Engineering Co., P. O. Box 5278, Pasadena, Calif.
Pressure, force, and acceleration pickups; complete analog and digital instrumentation systems; logging systems; custom instrumentation
(See advertisement on page 168)

Wickes Engrg. & Const. Co., 12th St. & Ferry Ave., Camden 4, N. J.
Supervisory control systems; electronic components; packaging

Wiegand Co., Edwin L., 7500 Thomas Blvd., Pittsburg 8, Pa.

Wilcolator Co., 1001 Newark Ave., Elizabeth, N. J.
Thermostats

Wild Heerbrugg Insts., Inc., Main & Covert Sts., Port Washington, N. Y.
Optical and photographic instruments; surveying instruments; instrument-shop instruments

Wilder Inc., R. S., 26 Bedford St., Waltham 54, Mass.
Microprojectors; precision instrument parts

Wilder Mfg. Co., Inc., Mechanic St. & Erie R.R., Port Jervis, N. Y.
Soldering iron holders
(See advertisement on page 197)

Wilkens-Anderson Co., 4525 W. Division St., Chicago 51, Ill.
Laboratory supplies

Wilkor Products, Inc., 2882 Detroit Ave., Cleveland 13, Ohio
Fixed and variable resistors; negative-temperature coefficient resistors

Will Corp., 39 Russell St., P. O. Box 1050, Rochester 3, N. Y.
Laboratory supplies and apparatus

Willey's Carbide Tool Co., 1342 W. Vernor Highway, Detroit 1, Mich.
Precision tools

Williams Apparatus Co., Inc., Herald Bldg., Watertown, N. Y.
Pulp and paper testing equipment and flue gas analysis apparatus

Williams Bros., Inc., 1125 W. Beardsley St., Elkhart, Ind.

Williams, Brown & Earle, Inc., 904-906 Chestnut St., Philadelphia 7, Pa.
Laboratory supplies

Williams Gauge Co., 1620 Pennsylvania Ave., Pittsburgh 12, Pa.
Water level gages

Williamson Development Co., 317 Main St., W. Concord, Mass.
Electrical and mechanical instrumentation

Wilmad Glass Co., Inc., Frankline & Flower Sts., Landisville, N. Y.
Glass apparatus and components

Wilmar Mfg. Co., Inc., 1110 Truman Rd., Kansas City, Mo.
Electrical and electronic components

Wilmington Fibre Specialty Co., New Castle, Del.
Fibre products

Wilmotte, Inc., Raymond M., Box 397, Kendall Branch P. O., Miami, Fla.
Electronic gaging instruments

Wilson & Co., G. C., 1915 Eighth Ave., Huntington, W. Va.
Electronic control equipment; delay; interval, repeat cycle and program timing controls

Wilson Co., H. A., 2655 U. S. Route 22, Union, N. J.
Thermostatic bimetals

Wilson Mechanical Instrument Div., American Chain & Cable, 230 Park Ave., New York 17, N. Y.
Hardness testers

Win Sales Co., P. O. Box 257, Forest Hills 75, N. Y.
Scientific specialty items

Winchester Electronics, Inc., Willard Rd., Norwalk, Conn.
Connectors; plugs; clips; posts; jacks

Winn, Inc., J. H. 620 Washington St., Winchester, Mass.
Instrument pointers & dial hands; screw machine parts

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.
Ignition hardness test sets; aircraft engine instruments; thermocouples and instrument accessories; tachometers; vacuum gages; radio and telegraph keys; molded rubber cord sets, megohmeters, Wheatstone bridges

Winzeler Mfg. & Tool Co., 7355 W. Wilson Ave., Chicago 51, Ill.
Precision gearing; dies; stampings

Wirt Co., 5221-27 Greene St., Philadelphia 44, Pa.

Wolfe Co., Franklin C. 10567 Jefferson Blvd., Culver City, Calif.
Static sealing devices for flanges, wave guides, connectors, fittings and fasteners in normal temperature ranges

Wolfe & Mann Mfg. Co., 28th & Sissons Sts., Baltimore 11, Md.
High and low voltage switchgear control and protection for generators and substations; bus runs; industrial controls; metal products; graphic panels; electronic chassis

Wollensak Optical Co., 850 Hudson Ave., Rochester 21, N. Y.
Optical instruments

Wolverine Tube Div., Calumet & Hecla Consolidated Copper Co., 1850 Guardian Bldg., Detroit 26, Mich.

Wood Counter Lab. 1525 E. 53rd St., Room 1101 Chicago 15, Ill.
Radiation detecting and measuring instruments

Woodruff & Stokes Co., Inc., 349 Lincoln St., Hingman, Mass.

Woods "Lab. Apparatus", F. W., 140-6 Warden St., Pittsburgh 20, Pa.
Biological laboratory supplies

Woods Hole Oceanographic Inst., Woods Hole, Mass.
Oceanographic instruments

Woodworth Co., N. A., 1300 East 9 Mile Rd., Detroit, Mich.
Gages for physical measurements

Worley Jewel Co., John, North Falmouth, Mass.
Sapphire and carbide bearings; orifices and wear parts in small sizes to close tolerances
(See advertisement on page 122)

Worner Electronic Devices, Rankin, Ill.
Photoelectric equipment

Worthington Corp., Harrison, N. J.
Liquid meters and instrument air compressors; pumps; motors; industrial mixers

Wroble Engineering Co., RD #2 Shellstone Rd., Amsterdam, N. Y.
Universal testing machines

Wyland, George C., Center St., Ramsey, N. J.
X-ray tubes and cameras

Y

Yardney Electric Corp., 40-46 Leonard St., New York 13, N. Y.
Silver-zinc and silver-cadmium batteries

Yarnall-Waring Company, 102 E. Mermaid Lane, Chestnut Hill, Philadelphia 18, Pa.
Water columns; water gages and blow-off valves for steam boilers; spray nozzles for liquids; hydraulic valves for presses

Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio
Thermistor thermometers, temperature controllers; intercommunication amplifiers; interval timers

Yonkers Lab. Supply Co., 70 Palisade Ave., Yonkers 5, N. Y.
Laboratory supplies

York Ice Machinery Corp., York, Pa.
High altitude test and calibration chambers

Young Bros. Co., 6511 Mack Ave., Detroit 7, Mich.

Z

Zagora Gears, Inc., 1327 South Mint St., Charlotte 3, N. C.
Precision fine-pitch spur, helical, bevel, worm gears and worms

Zeiss, Inc., Carl, 485 Fifth Ave., New York 17, N. Y.
Importers and distributors of microscopes, polarimeters, spectrophotometers, refractometers, micro-movie equipment, and scientific apparatus
(See advertisement on page 148)

Zenith Electric Co., Inc., 152 W. Walton St., Chicago 10, Ill.
Transfer, remote control, and automatic-time switches; interval, automatic reset, precess, and impulse timers; program clocks, reversing starters, and magnetic contactors
(See advertisement on page 226)

Zenith Optical Co., Huntington 19, W. Va.
Microscopes; lenses; optical flats

Zenith Optical Laboratory, 1940 Great Neck Rd., Copiague, L. I., N. Y.
Optical products; ultrasonic drilling and grinding
(See advertisement on page 151)

Zenith Mfg. & Chem. Corp., 82 Beckman St., New York 38, N. Y.
Instrument cleaning machines and solutions

Zernickow Co., O., 15 Park Row, New York 38, N. Y.
High-accuracy tachometers for rotational, peripheral and surface speeds for plant and laboratory use
(See advertisement on page 209)

Zero Manufacturing Co., 1121 Chestnut St., Burbank, Calif.
Precision sheet metal work for electronics, aviation and guided missile components; instrument cases

Zoomar Corp., 55 Sea Cliff Ave., Glen Cove, N. Y.
Photometers; photomicrographic instruments; exposure meters

Zophar Mills, Inc., 112-130 26th St., Brooklyn 32, N. Y.
Waxes and compounds used in electronic and electrical industries

Nuclear Reactors for Industry and Universities

written by eight eminent authorities and edited by Ernest H. Wakefield

CONTENTS

Chapter I. Nuclear Reactor Types
Chapter II. Availability and Selection
Chapter III. Radioactivity Measurement
Chapter IV. Radiation Protection
Chapter V. Reactor Control
Chapter VI. Instruments for Experiments
Chapter VII. Cost Study
Chapter VIII. Legal Aspects

APPENDIX—Glossary of Terminology, Cloth, 102 pages, photos and diagrams, 4-page index.

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By A. J. YOUNG

This book is a "must" for all men who have to do with the automatic control of industrial processes.

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No one is better qualified to treat this subject than the author who is well-known in both British and American instrument circles as Head of the Central Instrument Section of Imperial Chemical Industries Limited.

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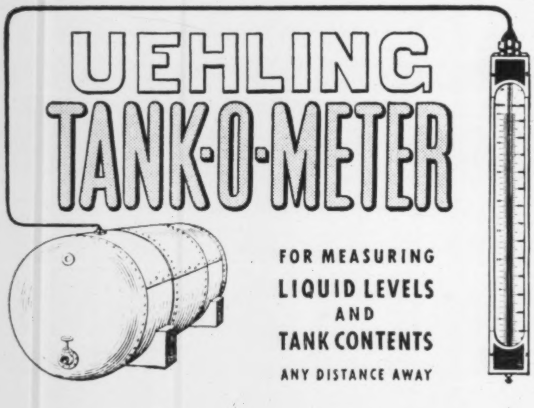
131 pages, illustrated, index, 1955.

$2.00 postpaid

Instruments Publishing Co.,
845 Ridge Ave., Pittsburgh 12, Pa.

UEHLING INSTRUMENT COMPANY

473 Getty Avenue, Paterson 3, New Jersey
Recording, Indicating and Control Apparatus



TANK-O-METERS may be applied to the measurement of ACIDS, ALKALIS, WATER, OIL, GASOLINE, ALCOHOL, BEVERAGES, TAR, MOLASSES, MILK, PAINTS, VARNISHES, SODIUM SILICATE, SOLVENTS, OR ANY OTHER CHEMICAL SOLUTION. *Send for Bulletin No. 945.*

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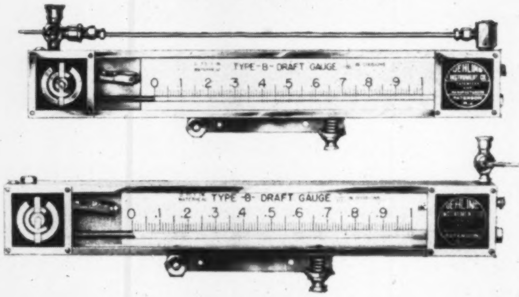
For Plus or Minus Pressure
For Differential Pressure



The Uehling Draft Gauges are available with scales from 10" to 40" and waterheads ranging from 1" to 8". Scales are graduated for every 1/100" of waterhead. Each instrument is housed in a durable aluminum case with glass front and adjustable scale. They are extremely accurate as each instrument is individually calibrated. Furnished for draft, pressure, or differential pressure. *Send for Bulletin* 1146.

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Uehling U-Tube Pressure and Vacuum Gauges consist of straight Pyrex tubes with a bottom metal connecting base, housed in aluminum case with glass front.

Each instrument has an external micrometer scale adjustment, zero check cock, and drain valve.

Scale lengths from 10" to 100".

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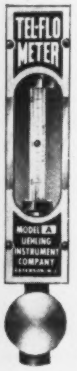


For measuring flow rates and purging line. Are accurate, exceptionally durable, and attractive. Housed in aluminum case with plastic front to protect graduated glass tube. Can be furnished in aluminum, brass, or stainless steel bodies (or any other metal). Suitable for maximum pressures of 300 lbs. Higher pressures upon request. Furnished with or without control valve and with either top, side, or back connection.

Send for Bulletin 553.

SPECIAL TANK-O-METERS

For fuming liquids, such as hydrochloric acid, nitric acid, propane, butane, ammonia, ethyl chloride, etc.

PRESSURE AND VACUUM GAUGES

Meet the most exacting requirements and combine accuracy, reliability, simplicity and durability. Housed in durable Aluminum cases with glass fronts. Standard instrument covers a range of 31 inches of mercury head. A catch-all for trapping visibly shows any condensate in the connecting line. Each scale has a knurled micrometer screw adjustment. A simple means is provided for cleaning the Pyrex manometer. May be calibrated in any desired units for pressure or vacuum and may be provided with a plus or minus scale to read either vacuum or pressure on the same instrument. Length to suit any range. Greater flexibility is made possible by choice of either mercury or one of three other indicating fluids.

Send for Bulletin 147.

MERCURIAL BAROMETERS

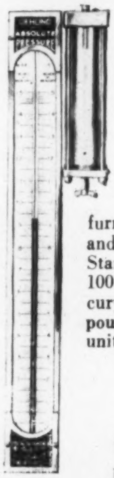
The Uehling Mercurial Barometer is furnished with a scale range of 20" to 31" of mercury graduated for every 1/10", with external vernier scale adjustment which provides readings of .01 of an inch of mercury throughout the range of 20" to 31" of mercury, or with a scale range of 500 to 780 millimeters of mercury graduated for every 1 millimeter with external vernier scale adjustment, which provides readings of .1 millimeter of mercury.

It can be furnished for flush mounting or surface mounting with or without oak panel board.

Send for Print 1155.

For more information circle **424** on inquiry card.

MERCURY COLUMN ABSOLUTE PRESSURE INDICATORS



Uehling Mercury Column Absolute Pressure Gauges are designed for exacting requirements of modern engineering practice, and combine accuracy, reliability, simplicity, and durability. Used with all processes where extremely accurate absolute pressure determinations are essential. Can furnish catch-all for trapping and showing any condensate. Standard scale lengths of 7" to 100", graduated in 1/10" of mercury absolute pressure or in pounds or in equivalent metric units.

Send for Bulletin 247.

COMBINED BAROMETER AND VACUUM RECORDER

Records barometric pressure and vacuum on same chart. Distance between the two recorded lines represents the absolute pressure. Permanent accuracy and remarkable legibility are the outstanding characteristics of this recorder. Accuracy is obtained by the employment of the mercury column principle and consequently this recorder has the same high degree of accuracy as the mercury column indicator. It employs no springs, diaphragms, or multiplying levers, therefore holds its calibration permanently without readjustment.

Send for Bulletin 150.

UEHLING VACUUM RECORDER

Same as above, without barometric pen.

Send for Bulletin 140.

Simplicity...

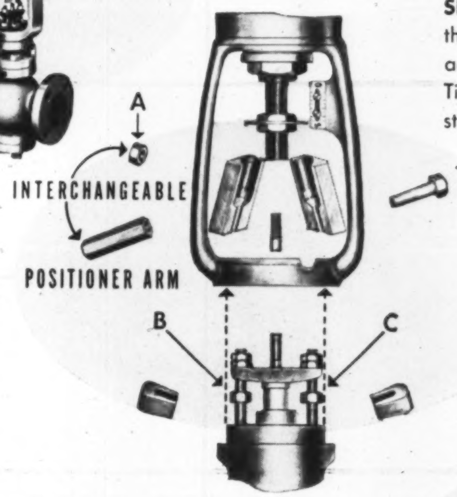
KEYNOTE

OF THE NEW H-D ACTUATOR

ENTIRE ACTUATOR may be removed and replaced without disturbing the packing box. By loosening nuts A, B, and C the actuator may be lifted over the plug stem.*

*See clearance denoted by dotted lines and arrows.

YOKE is stirrup-type of cast nodular iron. Held to bonnet by stainless steel clips. May be rotated 360° on bonnet.

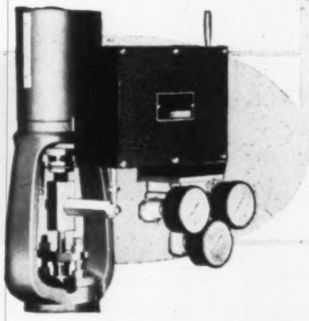


SPLIT COUPLING has L.H. (upper) and R.H. (lower) threads. Stems do not engage—do not meet. Coupling acts as a turnbuckle for adjusting plug seating tension. Tightly clamped coupling prevents twisting of plug stem.

SLOTTED HOLDING CLIPS permit removal of clips without removing nuts B and C.

SPRINGS are available in three interchangeable ranges, 3-15, 5-25, and 6-30 psi. Interchangeable in any actuator — no additional parts required.

POSITIONER BRACKET (Universal) supplied on all valves for the mounting of any positioner. No valve disassembly required — Positioner can be mounted in the field by removing nut A and replacing it with the positioner arm.



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SALES OFFICES IN ALL PRINCIPAL CITIES
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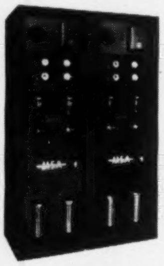
J. BLAKEBOROUGH AND SONS, LTD., BRIGHOUSE, YORKS, ENGLAND; TERMOKIMIK CORP., MILAN, ITALY

For more information circle **425** on inquiry card.

M-S-A (LIRA) Infrared Analyzer (Model 200)

Low-cost deflection type unit for automatic, continuous, high speed, accurate analysis. Detects one component in a simple or complex mixture of gases or liquids. Unitized construction makes maintenance easy. All controls readily accessible on front panel. Write for details.

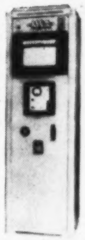


M-S-A Carbon Monoxide Analyzer

Single or multipoint cabinets designed as alarms or recorders are available for detecting or measuring low concentrations of carbon monoxide in air. Measurements are based upon measurement of heat of oxidation when sample is drawn through granular catalyst. Write for details.

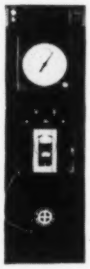
M-S-A Combustible Gas Analyzer

Adaptable for use with any gas or vapor of which the explosive range, and molecular weight are known. Applications extend to all industries where combustible fluids are employed. Now available with remote filament heads specifically adapted to high temperature applications. Write for details.



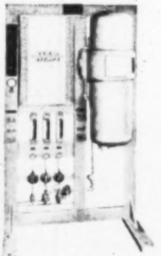
M-S-A Gas Thermatron

Simultaneously uses thermal conduction and thermal convection to provide simple, accurate, physical measurement of a single component in a complex mixture of gases without interference from other constituents. Can be used in many gas mixtures. Write for details.



M-S-A Oxygen Indicator

For precise, continuous measurement of oxygen content of inert and combustible atmospheres in chemical, metallurgical and petroleum industries. Provides means for improving safety of utility operations and controlling pipeline corrosion. Write for details.



M-S-A Water Vapor Recorder

Detects trace moisture in air or gas streams. Operation is based on measurement of the heat energy exchanged when a gas is adsorbed on or desorbed from the surface of a solid adsorbent. Can be calibrated for various ranges from 0 to 10 parts per million up to several percent. Write for details.

This line-up of M-S-A® Gas Analyzers can help solve your process stream problems

M-S-A Gas Analyzers have earned a sound reputation for on-stream accuracy and dependability while solving a myriad of complex control problems. Chances are, some of the problems confronting you now have already been solved for others, with one of the basic units described above.

The experience and service we can bring into play may provide the breakthrough you're looking for in successful process stream control. Our thirty years in the business of gas analysis instrumentation are worthy of your consideration. Get in touch with an MSA Instrument Specialist for details, or write for helpful literature.

MSA

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For more information circle **426** on inquiry card.